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REPORT

ON

THE MEDICAL TOPOGRAPHY AND STATISTICS

OF

THE NORTHERN, HYDERABAD AND NAGPORE DIVISIONS, THE TENASSERIM PROVINCES, AND THE EASTERN SETTLEMENTS.

COMPILED FROM THE RECORDS

OF THE

MEDICAL BOARD OFFICE.

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NORTHERN DIVISION.

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NORTHERN DIVISION.

General description. This division of the army, lying on the eastern coast of the peninsula, between the 16th and 20th degrees of north latitude, came into the possession of the East India Company, in the year 1766. Of the five districts, formerly known as the "Northern Circars," four, viz. the collectorates of Masulipatam, Rajahmundry, Vizagapatam and Ganjam, are comprehended in this division,—the fifth Guntoor, lying south of Kistnah river, having been annexed to the Centre Division; in the report for which it is described.

In extent it is estimated to contain an area of 32,570 square miles, and a population amounting to 2,351,463 souls.

The division is bounded on the east, in its whole length, by the bay of Bengal; on the west by a chain of ghauts separating it, on the southern part, from the country of the Nizam, and on the north, from that of Gundwanah, which is but little known to the British; on the south it is bounded by the Kistnah, which separates it from Guntoor; and on the north by the Chilka lake, and the country of the Goomsoor Rajah.

The general aspect of the southern portion of the country, including Masulipatam and Rajahmundry, is that of a flat alluvial plain, (but little elevated above the level of the sea,) rising gradually towards the ghauts, which are here at a distance of from 50 to 60 miles from the coast. Further north the country is irregularly hilly, between the coast and the ghauts, which approach considerably nearer to it, rich alluvial plains being every where found between the hills. The climate of the coast, though hot and oppressive, from March till June, may be said to be generally salubrious, from having at that time, the advantage of the cool sea breeze, and a mild temper-

ature, throughout the other months of the year. The ghauts, though possessing a colder climate, are scarcely habitable either by Europeans, or by the natives of the coast, from the malarious condition of the atmosphere, occasioning fevers both of the intermittent and remittent type, from which few who visit these localities escape;—and consequently the hilly regions, as well as the country westward towards Nagpore, are but very imperfectly known, extensive tracts of it never having been surveyed.

Stations in the Division.

The civil and military stations in the division, are Masulipatam, Ellore, Condapillay and Ragapore, in the Masulipatam collectorate.—Rajahmundry and Samulcottah, in that of Rajahmundry;—Vizagapatam, Vizianagrum, and Palcondah, in the Vizagapatam district;—and Chicacole, Berhampore, Russel-condah, Aska, and Kimmedy in the Ganjam district.—A small and inconsiderable French settlement, comprizing a limited tract of country on the coast, called Yanam, lies opposite to Injeram, on one of the branches of the Godavery, where some coasting trade is carried on with Pondicherry, and other French settlements in India.

The out stations of Condapilly, Ragapore, Palcondah, Kimmedy and Aska, being only occupied by detachments of native troops, relieved periodically from the head quarters, of corps, and under the charge of medical subordinates, require no separate notice.

DISTRICT OF MASULIPATAM.

General description.

The district, or collectorate of Masulipatam, has undergone several changes, as regards its boundaries, since it first came into the possession of the East India Company, but it is only necesssary in this report, to describe it as they are now fixed.

It is about 113 miles in length, by 100 in breadth, comprehending an area of 4,820 square miles, and contains a po

pulation,according to the census of (1837), of males 1,77,472, females 1,54,567, making a total of 3,32,039, or about 69 souls to the square mile.

It was formerly one of the northern circars, and belonged to the Nizam, who ceded it in 1765, to the English. Upwards of two centuries ago, the Dutch had a commercial settlement here, and several of their tombs bearing date 1660, are still to be seen; they do not appear to have had any houses in the pettah, but to have lived entirely in the fort, for the security of their property.

The French under M. Dupleix acquired possession of the fort, and part of the surrounding territory.

In 1765 the fort was re-captured from them, after a smart engagement, by a detachment of the English army under Colonel Forde; and has ever since remained in our possession.

The inhabitants are chiefly gentoos, the proportion of mahomedans not being more, it is said, than 1 in 20.

Boundaries and appearance of the country.

The district is bounded on the south-west by the river Kistnah, on the north-west by the Nizam's territories, on the north-east by the river Godavery, and on the south-east by the bay of Bengal. From Beizwarrah, a town on the banks of the Kistnah, about 45 miles from Masulipatam, the country to the north-west is hilly, and rises in elevation as it approaches the Nizam's boundaries; some of the valleys are picturesque and very fertile, although there is a good deal of jungle, affording shelter to tigers, bears, and other wild animals. To the south-east of Beïzwarrah, as far as the sea, the country is an extensive plain, without any elevation, that can be called a hill; the general level of this plain is but little above the sea, and in one part near its middle, it sinks somewhat and forms the great Colair lake. Along the coast, the level is rather higher, in consequence of the sand banks thrown-up by the sea, which oppose the only barrier to its encroachment, when spring tides and hurricanes occur.

Rivers. Besides the great rivers Kistnah and Godavery, which bound the district on two sides, there are many smaller streams intersecting it in different directions. Some take their rise in the north-west, and fall into the Godavery on the one side, or the Kistnah on the other, whilst others, taking a central direction, flow into the Colair lake. Many of them are supplied entirely by the rain that falls among the hills, and are nothing more than mountain streams; and others are mere channels, by which the surplus waters of the Kistnah and Godavery, find a passage to the sea, when they overflow their banks. A stream leading from the Godavery, and another from the Colair lake, unite and form the Oopoolair, a considerable river, which falls into the sea at Maddapolliam; it is salt for several miles inland, and deep enough for the passage of boats, between the sea and the lake. The Moonyair, also a considerable river, falls into the Kistnah about 28 miles above the Beizwarrah; another, the Boodwair, takes its rise a little to the north-east of Mylavesum, and after traversing the country among the hills, finds its way round the north-east end of the Beizwarrah range, and ultimately runs into the Colair lake. The head of the Tummylair is also among these hills, but higher than the source of the Boodwair, and taking a central direction, passes close to Ellore, and like the latter, runs into the lake.

Between Beizwarrah and the lake, on one side, and the sea on the other, there are no rivers of any size, with the exception of the Poolair, which is more properly a canal supplied by the overflowing of the Kistnah, to which it was formerly joined a few miles below Beizwarrah. This channel partly from neglect, and partly from the obstacles thrown in the way of its being kept open, by interested Zemindars, has been closed for many years, till lately, when it was partially cleared by the Civil Engineer of the division. The new opening into the Kistnah is further down the river, and is furnished with sluices, for the purpose of regulating the supply of water for irrigation. Originally, this river traversed the country, from 30 to 40 miles towards the sea, and it is

said to be the intention of the authorities to re-open it throughout its entire length, but the new cut comes far short of this at present. The only canal of any consequence in the district, if the Poolair does not come under the denomination, is one, which opening from the sea, about a mile or a mile and a half from the fort of Masulipatam, and passing close to its walls, through the swamp, with which it is surrounded, joins the Kistnah about 12 or 14 miles inland. It is sufficiently deep to admit small vessels, with cargoes of bricks, tiles, firewood, &c. but its entrance to the sea is obstructed by a bar of hard sand, close to the surf, and which at low water, completely prevents the passage of boats, to or from the shipping in the roads.

Colair lake. The Colair, the only lake in the district; is situated between Ellore and Masulipatam, but much nearer the former than the latter town, and, during the rains is said to cover upwards of twenty square miles; at this time the communication between Masulipatam and Ellore, is kept up principally by the Beizwarrah road. The lake has no permanent outlet, except that which joins the Maddapolliam river, a short distance from the sea. About twenty years ago the water rose so high as to force a new passage to the sea,and although it is closed up annually during the dry season, it again becomes open in the monsoon. These waters abound with fish, and the shores with wild fowl.

Tanks. Tanks are numerous all over the country, but there are none worthy of particular notice. In the dry season of the year, the chief dependance for water is on large brick built wells, sunk, some of them, to a great depth; the water of which is in general very good.

Hills. There are no hills within less distance than 45 miles of Masulipatam. The nearest are those of Beizwarrah at which place, as well as at Condapilly, nine miles farther west, they rise to a considerable height; but at Condapilly, the highest hills in the district, they do not exceed in elevation 1,700 feet. They are principally composed of a hard, small grained, dark coloured granite.

Roads. There are five roads leading in different directions from Masulipatam, to join the great northern line. One runs south along the coast to Ongole; another to Guntoor; the third and principal one to Beizwarrah; a fourth to Ellore, passing by the Colair lake; and the fifth to Samulcottah, by the coast. From want of materials, the roads can only be kept in order at a great expense, and they are always very heavy during the rains.

Mineral productions. Granite, sienite, marble of various kinds, slate, lime stone and iron, are found in the interior of the district; diamond mines were also formerly worked, but it would appear that they do not now yield any profit. There are no mineral springs, with the exception of one, a hot spring in the bed of the Godavery.

Soil. The soil is mostly alluvial, and is very productive, except within a short distance of the sea, where it becomes sandy and light. Of the 4,820 square miles, which the collectorate is said to contain, about 500 are under cultivation, and the greater part of the remainder, is pasture land. Rice is not grown so extensively as the soil would admit of, a sufficient, and constant supply of water not being available; this want it would seem was better attended to, in former than in latter times; though if the improvements going on at present, under the direction of the Engineer, in opening canals, and repairing and making tanks and bunds, be persevered in, the evil will be greatly lessened; in the mean time the people have to depend on other places for this indispensable article, and a large quantity of rice is annually imported from Calcutta, and from the Tenasserim coast. Independently of the employment cultivation would give to the ryots, the ship rice is often bad, and the price high, from its having to pass through the hands of merchants, who have it in their power to regulate the market.

Vegetable productions. Dry grains,are produced in abundance; tobacco, cotton, oil seeds and chay root, are also raised. The chay is

much used by the native dycrs, and cloth printers, in preparing their red colours. All the native, and many of the European vegetables, may be reared,and good carrots, turnips, cabbage, pcas, endive, lettuce, celery, and even potatoes, produced in the gardens at Masulipatam, are procurable; and there is no doubt but the supply in the bazaar would be rcgular and abundant, if the number of European residents was sufficient to create a demand for them.

The proportion which the agricultural classes bear to the whole population, is calculated to be about one thirteenth. Some of them are in easy circumstances, but others, are at all times little above want. When the seasons are favourable, all classes can procure a subsistence, but when the rains fail, distress is more or less generally felt, and this of late years, has been often the case.

Native dwellings. The houses of persons of the better description,are built of brick or mud, of a convenient height, with good sized doors, and small windows, they are roofed with bamboos and palmira leaves, or tiled; but the huts of the poor are generally constructed in a conical form, of bamboos and palmira leaves, resting on the ground, or raised on low mud walls, with an entrance on one side, better deserving the name of a hole than a door. In these the only things to be met with, are a few cooking and water chatties; but in the dwellings of the wealthy it is not uncommon to find cots, chairs, and other European articles of furniture.

The lower parts of the collectorate are open, and comparatively frec from jungle, and rocks. Topes of mango, tamarind and palmira trees are numerous,besides a great variety of other descriptions, some of which are esteemed for their medicinal virtues, as well as for the quality of the timber. One of these, the babool—acacia arabica—which grows plentifully on the banks of the Kistnah, is of importance from the quantity of gum it affords, and the employment it gives the people

in gathering it. It is in demand principally by the mootchies and cloth printers.

Wild animals. The wild animals met with, are the tiger, bear, hyena, wolf, byson, hog, jackall, deer, antelope and hare. The larger kinds, are found only in the jungles at a distance from the sea; but the smaller ones are common all over the country. Wild fowl are also very numerous.

Town & station. Masulipatam is the principal town in the collectorate, not only on account of its being the chief military station, and usually the head quarters of the division, and the chief residence of the civil servants; but also from its population, trade, central position, and the facility of communication with Madras by sea; it is also the grand depôt for military, and commissariat stores, for Secunderabad, Jaulnah and Kamptee. It lies in north latitude 16°. 9′., and east longitude 81°. 12′;—and is 322 miles north of Madras, by the high road, but only 286 by the coast; it is 797 miles distant from Calcutta.

The cantonment stands on a low sandy ridge, about two miles from the sea. Between the beach, which is raised a little by sand banks, and the town, the ground is so low that it forms a swamp, and sometimes a lake of considerable extent in the monsoon, in about the centre of which stands the fort; that part of the swamp north-east of the fort, is only overflowed at spring tides, during the monsoon; and in the hot season is perfectly dry and hard, making the best drive about the place.

Swamp. When under water, the swamp extends beyond the limits of the native town, but its deepest part is near the south-west side of the fort, where it is usually a bed of mud in the dry season of the year, and through which, a canal runs to the sea from the Kistnah river. The lake was formerly divided into two parts by bunds, constructed about 40 or 50 years ago. From Çaramede, a fine tope, a mile north-east of the fort, where there is excellent fresh water,

one of these bunds ran along the beach, until it approached close to the fort, where it joined the glacis, and the second passed from the glacis on the other side of the fort, to the rising ground near the pettah;—thus completely shutting out the sea from that part north of the salt river. The one was called the eastern dyke, and the other the western; in each of which was a sluice for the exit of the water, collected within them in the monsoon. These bunds have long been useless, from neglect; indeed the greater portion of the western, and the Caramede part of the eastern dykes, have disappeared, and the sea has now free ingress at all quarters; but as the swamp is higher than the sea at low water, it is only in unusually high spring tides that it is flooded; on ordinary occasions, the tide is confined to the river, and one or two small channels branching from it, in all of which it ebbs and flows. Formerly there was a free passage for the water, by arches passing under the causeway, but these have lately been closed up, the advantage gained however, by the exclusion of the sea water, is nearly counterbalanced by the retention of the rains, which, from the lowness of this part of the swamp, and the want of any other outlet, collects into stagnant pools, until absorbed or evaporated.

During the dry season, some parts of the swamp produce a short stunted grass.

Mirage. The *mirage** is a common phenomenon on the morass, and frequently the resemblance to water, both smooth and rippled, is so perfect, that it is quite undistinguishable from a real lake or sea, until close upon it, when it gradually vanishes; on looking round, the same appearance is distinctly seen on the ground just travelled over, so that if unaware of the cause, a person would be not a little puzzled, to account for having passed through so much water, without its being observed.

Behind the pettah there is another morass, but smaller

* The Sahr-ab, or water of the desert, as it is called by eastern writers.

than the one in front; this is crossed by a bridge of five arches, near its centre, where it is scarcely ever dry, and is so deep in the rains, as not to be fordable. These swamps are partially united at the south west end of the pettah, in heavy monsoons.

Fort. The fort, as before said, stands about the middle of the swamp, opposite to the north east end of the native town, with which it communicates by a causeway. It is an oblong square, of 800 by 600 yards, with high ramparts, and a wide and deep ditch. Within the fort are, the arsenal, powder magazines, the garrison hospital, and barracks for one European and one native regiment; also the protestant church, and a roman catholic chapel, with several large houses, many of which are going to ruin from being untenanted. The Commanding officer, garrison surgeon, fort adjutant, engineer, commissary of ordnance, and subordinate staff, still reside within the walls. There is no good water inside, and that used for drinking is brought from the pettah, or from the Caramede tope. In former days it was conveyed from wells in the pettah, by a covered channel, which ran along the causeway, and was received into a large reservoir within the ramparts, but these works have long been out of repair.

Cantonment. The ridge on which the pettah and cantonment stand, is about a mile north-west of the fort; it is four miles and a half in length, by one in breadth, being highest near the south-west extremity, but falls so much in the direction of the native town, that the greater part of it, and the cantonment, are but little raised above the level of the swamps when flooded; and from the difficulty, or perhaps impossibility, of the water running off, many parts remain flooded for several weeks. Attempts have been made to drain the place, by means of convict labour, though never on so large a scale as was attempted in 1838, but even after channels have been made, the trouble, and attention necessary to keep them open, when cut through sand, is so great, that it can scarcely be effected. One third of the space mentioned, is occupied by the cantonment, which is

bounded on the south-west by the native town; on the south east by the salt swamp; on the north-east by ground as high as that of the cantonment, and usually dry; and on the north-west, partly by the fresh water morass, which does not reach the north-east extremity of the cantonment, except in the heaviest rains. The cantonment is irregularly laid out, but the principal roads run parallel with the beach, and join that from the fort, as it passes westward through the pettah; these are again crossed at two or three places by others, which divide the cantonment into several irregular squares.

Public buildings. The public buildings are the provincial and zillah courts, the collectors cutcherry, the jail, barracks for two native regiments, and a chapel. Several years since, a building containing a theatre and ball-room, was erected by public subscription, it is now however private property, and is occupied as a mess house.

The lines and hospital of one regiment, are close to the boundary hedge on the north-east; those of the other corps, are on the edge of the salt swamp, but the hospital stands in the centre of the cantonment, near the jail. The site of both is dry, but during the rains and for sometime afterwards, there are many pools near them, which cannot be drained, but the water is gradually absorbed by the light sandy soil. The public buildings, as well as private dwellings, amounting to between 40 and 50 in number, are surrounded by thick prickly-pear hedges, which with numerous palmira, cocoa nut and other trees, materially obstruct the free circulation of air, and produce at certain seasons, an accumulation of putrifying vegetable matter. The water is generally brackish, chiefly from containing muriate of soda, which however, is in much larger proportion, in some wells than in others.

Native town. The native town is situated at the south-west of the cantonment, and occupies the remaining two thirds of the ridge, giving little more than three miles, for a population which, by the census of 1837, amounted to 27,884; of this number 24,029 were hindoos, and 3,855 mussulmans,

being in the proportion of a little more than one to six; a higher ratio of mussulmans, than is to be found in other parts of the collectorate, from the influx of persons of that religion occasioned by trade; a considerable number of persian and mogul traders, who have long been settled here, are included in the number.

The site of the town, particularly at the south-west end, is low and subject to much inconvenience from the lodgement of water. The principal streets are wide, airy, tolerably straight, and regularly built; and some of them run nearly the entire length of the town.

Robertson's Pettah.

There is only one large square, for which, and also the improved condition of part of the pettah in its vicinity, the people are indebted to Mr. Robertson, (formerly assistant to the collector), whose name it bears; and it has now become the principal market-place. Many of the houses in the town, are large and upper storied, substantially built with brick and chunam, and have tiled roofs. Even most of the dwellings of the poor are commodious and clean, the consequence probably, of the cleanliness required in the manufacture of cotton cloth, in which so many of the inhabitants are engaged. Altogether the pettah has somewhat of the air of a European town. The mogul merchants reside in the western quarter, in garden houses surrounded with high walls. Notwithstanding, however, the advantages it possesses over most native towns, there are many narrow lanes, and miserable hovels, which are completely flooded during the rains, and although small embankments are made in front of the doors at this time, to keep out the water, these houses cannot possibly be otherwise than damp and unhealthy; and they are consequently found to be the hot beds of disease, in sickly seasons.

Trades and Manufactures.

The great body of the people are employed in trades, and manufactures of various kinds, which although not carried on to the same extent, as in former times, when Masulipatam was celebrated all over the mercantile world for its printed clothes, they are still very

considerable, and of late are said to be improving. The manufacture of cotton alone, including weaving, printing, bleaching, washing and dressing of the various kinds of cloth, such as table linen, towels, ginghams, tartans, &c., employs so large a proportion of the inhabitants, of all ages, that it appears to have influenced the character and habits of the people, for no where is a better dressed, or more respectable looking native community to be met with. Indeed frugality among the better classes, most of whom have made their money in trade, seems to be carried to a fault, for according to report, they restrict their charity to the relief of brahmins alone. The poor and indigent, as in all mercantile towns, are however numerous.

Climate. The seasons may be divided into the hot, rainy and cold; the first commences in March, and ends about the first week in June; the second lasts from June, until the end of October, the greatest fall of rain occurring in the south-west monsoon; the annual average being about 35 inches. The third or cold season commences in November, and terminates about the end of February; at this period the sky is generally clear, with a cold breeze blowing from the north-east, and the mornings are usually cold and bracing. The thermometer ranging from 54° at sun rise, to 70°; and the mean temperature being from 65° to 76°, at noon, during the months of November, December, and January. In February the thermometer ranges from 66° to 84°; in March from 70° to 90°, and in April from 80° to 92°. During the two latter months, which are the most disagreeable throughout the year, the wind is frequently from the south-west, and is of a very relaxing and debilitating character. In May the temperature rises to 96° at noon, and sometimes even as high as 104°; the hot or land winds setting in pretty regularly, about the 8th or 10th of the month, but the excessive heat, is tempered by the sea breeze, which at this period usually sets in early in the afternoon. These winds in general, continue to blow steadily until towards the end of the month, when dense masses of clouds begin to accumulate in the south-west, and in the evenings north-westers, with thunder showers are frequent;

but the hot winds seldom terminate before the first week in June, when in regular seasons, the rains commence, lowering the temperature to about 86°.

The climate, from being hot and moist,—although there is reason to believe the mean temperature in the shade, is less by two or three degrees than that of Madras,—feels warmer, and the reflected heat from the sand, and saline crust on the swamp, in dry weather, increases the temperature considerably. The alterations of temperature, are however, not so great as at Hyderabad, and other parts of the Deccan, where a diurnal range of 30 to 40 degrees is not unusual; whilst at this station the highest range observed has been 24° and upon an average during the months of November, December, and January, the range seldom exceeds 10 or 12 degrees, whilst during the rest of the year, the variation between the day and the night, is much less.

Insects. Throughout the whole of the wet season, insects of different kinds are numerous, and very troublesome. After the first showers in June, the large black ant makes its appearance, some houses being overrun with them, but they are not destructive; the bite however is painful though no bad consequences follow from it. The white ants are numerous and destructive to clothes, books and furniture of every description, and it requires unremitting attention to keep them down; they also speedily destroy the beams and rafters of houses, and if allowed to go on undisturbed, will soon render a house dangerous to live in; the inside of the beams being sometimes completely destroyed, whilst the outside appears to be quite sound. At a later period of the monsoon, winged insects appear, and soon become a nuisance. In calm evenings, the air appears to be quite alive with them, and when the houses are lighted up, they are attracted in such numbers, as to render all attempts at reading, or other employment near the light, quite impracticable. Although

Snakes. not numerous, there are several kinds of snakes to be found; some few of which are venomous, but they are for the most part harmless. Lizards, centipedes and

small scorpions are also found, the sting of the latter being painful, but never dangerous; a thick paste made of ipecacuan and water, laid over the wound, speedily effects a cure.

Native treatment of disease.

The native doctors state, that intermittent fever seldom terminates in death, but, that on the other hand, a large proportion of the cases which assume the remittent or continued form, are fatal. In the first, they give mercury and decoctions of various kinds, with full diet; but in the latter, they appear to place their chief dependance on abstinence, which with the use of decoctions, is strictly enjoined for weeks, should the patient survive so long. Bowel complaints are frequent, and, as they commence, according to the native doctors, in the hot weather, before the rains set in, they suppose that they are produced by drinking too much water. In these affections they prescribe mercury, opium and spices;—cholera, they treat in a similar manner.—Beriberi, and dropsy, they consider as similar diseases, both in their nature, and in the exciting causes; and the treatment is nearly the same in both; they look upon them as tedious, but not very fatal, and in the treatment prescribe rust, and other preparations of iron, combinations of mercury, and sulphur, with spices; but their favourite remedy seems to be cow's urine, passed three or four times through a mass of powdered walnuts; and given to the extent of three or four ounces several times daily; but this, they acknowledge is not always retained on the stomach. Treeak-farook was formerly in high repute in these disorders, but lately it has not been so efficacious, in consequence as it is supposed, of adulteration in preparing it. Rheumatism is also a common disorder, and treated with hot spices, and decoctions. Consumption is often met with, and is said to be a tedious and fatal disease; but the native doctors believe that it is always the result of other disorders, such as fever, &c., to which the patient had previously been subject.

Native women suffer much after parturition, especially

from fever, which has of late proved very fatal. Cases of difficult labour are common, but native doctors never engage in the practice of midwifery; and as few of the midwives have the ability, or boldness to make an attempt at manual relief, European aid is often called for, in such cases.

Jail. The prison is situated in the centre of the cantonment on a well raised piece of ground. It was erected in 1819, and is built with brick and chunam. It is in the form of a cross; each wing being 80 feet long, and containing two cells 15 feet in breadth; that on the south-east side has an additional room which is used as a dispensary. The walls on the outside are 10 feet high, but the floors which are of brick and chunam, having been lately raised 12 inches, they are consequently lower on the inside. Each cell has one door and four windows, without any counter opening in the opposite wall, but there are ventilators in the roof. The jail is surrounded by a wall 14 feet high, which running at right angles to the wings, forms with them, four courts, appropriated for the use of the prisoners. In each there is a well, and a small detached building, originally intended as a cookroom and privy, but never employed for the latter purpose, necessaries having been built behind the blank walls which communicate with the cells; they are however only used during the night.

Hospital. The new hospital built outside the walls, was first occupied in 1842; it is a very substantial building, with a small compound adjoining, and communicates with the jail by a door way. It is raised about 8 feet from the ground, and contains apartments of the following dimensions. One ward 30 by 15 feet and 12 feet high. A dispensary 11 by 9 feet, a dead-room 10 by 9 feet, and two small rooms 10 by 7 feet. It is surrounded by a verandah 18 by 9 feet; the height of the outer wall is 10 feet.

JAIL OF MASULIPATAM.

No. 11.—*Table exhibiting the number of Admissions and Deaths of the Convicted Prisoners, from each class of diseases, for ten years, from 1829 to 1838 inclusive.*

CLASSES,	DISEASES.	1829 to 1838. Aggregatestrength 3863. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of diseases. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Totaladmissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick tseated.
Fevers.	Febrisephemera	31	0	53	1	193	16	391	25	584	41	15 ·117	7 ·020
	", intermit quot.	135	9	296	18								
	,, tertiana.......	5	0	30	0								
	., remittens.. ...	17	4	3	2								
	,. com; cont....	5	3	9	4								
	Cholera	17	10	57	31	17	10	57	31	74	41	1 ·915	55 ·405
Diseases of the Abdominal viscera........	Diarrhœa	32	9	53	8	72	17	124	21	196	38	5 ·073	19 ·387
	Dysenteria acuta et chronica	39	8	71	13								
	Obstipatio..	1	0	0	0								
	Hepatitis.......	1	0	0	0	1	0	0	0	1	0	0 ·025	0· 000
Diseases of the Lungs	Catarrhus......	46	2	26	2	54	6	34	7	88	13	2 ·278	14 ·772
	Asthma	4	2	3	2								
	Phthisis pulmonalis.........	2	2	1	1								
	Pneumonia.. ..	1	0	3	2								
	Palpitatio	1	0	0	0								
	Dyspnœa.......	0	0	1	0								
Diseases of the Brain.	Apoplexia......	1	0	2	1	6	1	10	5	16	6	0 ·414	37 ·500
	Epilepsia.......	0	0	3	1								
	Amentia........	0	0	1	0								
	Paralysis.......	3	1	3	2								
	Phrenitis.......	2	0	1	1								
Eruptive fevers......	Variola.........	24	7	0	0	106	7	0	0	106	7	2 ·743	6 ·886
	Varicella.......	81	0	0	0								
	Erysipelas.... ..	1	0	0	0								
	Anasarca.......	51	13	53	12	51	13	53	12	104	25	2 ·692	24 ·038
	Rheumat.acutus et chronicus..	34	2	60	1	34	2	60	1	94	3	2 ·433	3 ·191
Venereal affections...	Syphilis primitiva..........	2	0	3	0	2	0	5	0	7	0	0 ·181	0 ·000
	Gonorrhœa.....	0	0	2	0								
Specific diseases.....	Atrophia.	1	1	0	0	19	7	39	13	58	20	1 ·501	34 ·482
	Beriberi.......	13	6	32	12								
	Dracunculus....	2	0	0	0								
	Elephantiasis...	0	0	1	0								
	Scrophula......	1	0	1	1								
	Ulcus phagedenicum....,....	2	0	5	0								
Diseases of the eye...	Morbi oculorum	12	0	15	2	12	0	15	*2	27	2	0 ·698	7 ·407
Do, ,, Skin.	,, Cutis......	5	0	3	0	5	0	3	0	8	0	0 ·207	0 ·000
	Other diseases..	305	2	227	5	305	2	227	5	532	7	13 ·771	1 ·315
	Total..	877	81	1018	122	877	81	1018	122	1895	203	49 ·055	10 ·712

* From cholera.

JAIL OF MASULIPATAM.

No. 12.—*Table exhibiting the number of Admissions and Deaths of the Prisoners under trial, from each class of disease for ten years, from 1829 to 1838 inclusive.*

CLASSES.	DISEASES	1829 to 1838. Aggregate strength 685.				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
		1st Half.		2d Half.		1st Half.		2d Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers......	Febris int. quot.	2	0	6	2	3	1	8	3	11	4	1 ·605	36 ·363
	,, tertiana......	0	0	1	0								
	,, com: cont....	1	1	1	1								
	Cholera........	3	2	6	2	3	2	6	2	9	4	1 ·313	44 ·444
Bowel complaints...	Diarrhœa......	8	4	4	2	17	7	17	8	34	15	4 ·963	44 ·117
	Dysenteria acuta et chronica	9	3	13	6								
	Catarhus.......	2	0	0	0	2	0	0	0	2	0	0 ·291	0 ·000
Eruptive fevers......	Variola.........	42	11	2	0	97	11	2	0	99	11	14 ·452	11 ·111
	Varicella.......	55	0	0	0								
	Anasarca.......	6	4	3	1	6	4	3	1	9	5	1 ·313	55 ·555
	Rheumat acutus et chronicus..	4	1	1	0	4	1	1	0	5	1	0 ·723	20 ·000
	Syphilis primitiva..........	0	0	3	0	0	0	3	0	3	0	0 ·437	0 ·000
Specific diseases.....	Beriberi........	2	0	9	3	4	0	9	3	13	3	1 ·897	23 ·076
	Dracunculus....	1	0	0	0								
	Scrophula......	1	0	0	0								
	Morbi oculorum	0	0	0	0	0	0	0	0	0	0	0	0
	,, cutis....	0	0	0	0	0	0	0	0	0	0	0	0
	Other diseases..	12	1	13	0	12	1	13	0	25	1	3 ·649	4 ·000
	Total..	148	27	62	17	148	27	64	17	210	44	30 ·656	20 ·952

Remarks on the preceding tables.

The average annual strength of the convicted prisoners has been 386, and the annual admissions have amounted to 189, or 49·055 per cent on the strength during the ten years; the mortality has averaged 20 annually or 5·254 per cent on the strength; the total admissions having amounted to 1895, with 203 deaths, from an aggregate strength of 3863.

The prisoners waiting for trial have been comparatively few, the aggregate strength during the ten years amounting to 685; the admissions into hospital have been 210, or 30·656 per cent, and the deaths 44, or 6·423 per cent on the strength.

Table No. 13 Jail of Masulipatam.	1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Convicts.																						
Fever	41	2	17	0	31	3	25	1	15	1	167	16	136	10	58	3	69	2	25	3	584	41
Cholera	0	0	0	0	7	5	41	24	22	12	0	0	0	0	0	0	0	0	1	0	71	41
Diarrhœa	14	0	11	0	13	1	7	3	7	4	4	3	12	3	0	1	12	1	5	1	85	17
Dysentery	8	0	12	0	9	2	11	2	21	3	22	7	20	6	3	0	2	0	2	1	110	21
Anasarca	10	0	2	1	0	0	3	0	5	3	12	6	12	6	0	0	31	2	26	7	104	25
Beriberi	5	0	2	0	3	1	1	1	8	4	4	2	4	2	3	2	11	3	4	3	45	18
Admissions and deaths from these diseases.	78	2	44	1	63	12	91	31	78	27	209	34	184	27	64	6	128	8	63	15	1062	163
Total admissions and deaths	150	3	111	2	207	13	179	36	222	33	255	41	252	33	119	7	218	13	182	22	1895	203
Strength each year	108		102		240		389		603		512		476		425		509		499		3863	
under Trial.																						
Fever	2	0	0	0	0	0	0	0	4	1	3	3	2	0	0	0	0	0	0	0	11	4
Cholera	0	0	0	0	0	0	5	2	4	2	0	0	0	0	0	0	0	0	0	0	9	4
Diarrhœa	3	0	1	0	0	0	0	0	2	2	3	2	2	1	0	0	0	0	1	1	12	6
Dysentery	4	0	1	0	4	1	1	0	10	6	2	2	0	0	0	0	0	0	0	0	22	9
Anasarca	2	0	0	0	0	0		2	1	1	3	1	0	1	0	0	1	0	0	0	9	5
Beriberi	1	0	3	0	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	11	3
Admissions and deaths from these diseases.	12	0	5	0	4	1	8	4	28	15	11	8	4	2	0	0	1	0	1	1	74	31
Total admissions and deaths	21	0	8	0	11	2	12	4	118	*21	29	11	5	2	0	0	1	0	2	1	210	44
Strength each year	40		38		43		50		281		141		42		7		15		28		685	
Admissions and deaths amongst both classes of prisoners	174	3	119	2	218	15	191	40	340	57	284	52	257	35	119	7	219	13	184	23	2105	247
Total strength each year	148		140		283		439		884		653		518		432		524		527		4518	
Per centage of deaths to strength	2	·270	1	·428	5	·300	9	·111	6	·448	7	·963	6	·758	1	·620	2	·480	4	·364	5	·430
Per centage of sick to strength	117	·567	85	·000	77	·031	43	·507	38	·461	43	·491	49	·613	27	·546	41	·793	34	·913	46	·284
Per centage of deaths to sick treated	1	·724	1	·680	6	·880	20	·942	16	·764	18	·309	13	·618	5	·889	5	·936	12	·500	11	·733

* including 9 deaths from Variola.

In table No. 13 are exhibited the annual admissions and deaths from six of the principal diseases, viz. *fever, cholera, diarrhœa, dysentery, anasarca* and *beriberi;* the total sick treated and mortality are also given, for the purpose of shewing the great proportion of the whole mortality occasioned by these diseases; amounting to 194, out of 274, or fully 4-5ths.

The following extracts from the reports of the medical officer in charge, are interesting and bear upon several points elicited in the preceding tables.

" The celerity with which disease runs its course amongst the prisoners, especially when advanced in years, is remarkable, one of the fatal cases of dropsy was a striking instance of this kind. The patient had been in jail only a few months and came in a firm, healthy, old man; who, if judged from his corpulency, had been in easy circumstances, he soon began to fall off; but, as he felt no pain, he made no complaint. At last dropsy appeared, and when he applied for relief, his appearance was most miserable; instead of the fat old man, he was now a gaunt figure with his skin hanging loose about him; he died in a fortnight."

" The causes are doubtless confinement and restriction to a kind of diet to which they are unaccustomed. The prisoners never complained of quantity, but the murmurs regarding the quality were so frequent, that enquiry was lately instituted, and the rice, stored by the contractor for the use of the prisoners, was found so bad and so inferior to the samples which he had lodged in the court, that the officer in charge of the jail, ordered it to be thrown out. But independently of the disadvantages to which they are subject from their being obliged to take all the articles of diet from one person, the want of those stimulating and nourishing additions to their food, of which the natives are so fond, will in some degree account for that deficiency in constitutional vigour, necessary not only to resist the invasion of disease, but which also retards its progress." *Dated 30th June,* 1832.

"The mortality amongst the prisoners at this station during the year 1832, has been unprecedentedly great; owing to the extensive prevalence of disease, and the misery to which the native population was reduced by the late scarcity. For, although the diet and clothing allowed to the prisoners are a sufficient protection against these evils, a great proportion of the numerical strength at this period, was made up of poor creatures, whose health and strength were, in many instances, so far reduced previous to confinement, that no benefit was derived from the food and clothing, which this secured to them, or from the care and comforts of the hospital. In the course of the first half year, cholera, small pox and chicken-pox were epidemic, and although the latter disease was in every instance mild, no less than 25 cases of the other two terminated in death, during the second half year, beriberi, cholera, diarrhœa, dropsy, dysentery and fever were the prevailing diseases, and all of them were more or less fatal; 31 having been carried off by these disorders."

"The debilitated state of the sick prisoners at this time rendered stimulants and cordials a useful class of remedies, without which the proportion of recoveries would have been small indeed. In beriberi they were especially serviceable. Dropsy was very fatal, and stimulants only afforded temporary relief. The usual and most convenient form of stimulant was punch, made of arrack, and given three or more times daily."

"In comparing the proportion of fatal cases, with the numerical strength, they will be found to be nearly the same throughout the whole year; but the proportion of deaths to admissions, is much greater in the second than the first half." *Dated* 31*st December* 1833.

"The number admitted from anasarca is 33, and from beriberi 10. Under the former head are included all dropsical cases, though the effused fluid was not confined to the cellular membrane, if neither numbness, nor tottering debility of the legs were observable on admission; and all those

cases in which the latter symptoms existed although dropsy was present at the 'same time were returned as beriberi- Among the beriberi cases there were only two or three attended with œdema, and in one of them, effusion had already taken place in the chest and the patient died almost immediately. In two others, anasarca afterwards appeared, and one of them terminated in hydrothorax. The treatment, when there was only numbness, and loss of muscular power, was stimulant. Nux vomica was beneficial, but neither in this disorder nor in paralysis does this remedy complete the cure. It advances the improvement only to a certain extent, and when the dose amounts to 60 or 70 grains of the nut, it produces so much disturbance of the functions of the stomach and bowels that it must be decreased or omitted; and in either case the patient gradually relapses."

"In the treatment of anasarca greater confidence can be placed in the use of treak-farook, than in any other remedy. The cures effected by it, are not only more speedy, but more permanent, and unattended with any unpleasant consequences. It is remarkable that while 43 cases of these two disorders occurred among the prisoners, only six or seven appeared in each of the two native corps, each being nearly double the numerical strength, and stationed on the same ground."

"The rapidity with which thoracic effusion occurs among the prisoners, from the appearance of the first decided symptoms, till its fatal termination, is very great, and if not checked, death follows generally in a few hours."

"Bleeding from the arm in a large stream until the patient faints or becomes faintish, with blisters to the chest and spine afford the only hope of success, if in time bleeding always gives relief; but there is not much confidence to be placed in it even when relief is obtained; for in too many instances, the difficulty of breathing and oppression in the chest occur; and when bleeding is required a second time there

is but little hope of recovery; in one instance only has recovery taken place after a second v. s. If however time is gained for the blisters and internal remedies to take effect, there is reason to hope for recovery; the medicines generally employed are tinct. of digitalis and squills, each 20 drops, in one ounce of camphor mixture, every two or three hours according to the emergency of the symptoms, and afterwards treak-farook; the qualities of this medicine are not confined to its cathartic effects—in some instances there is but little purging, though it may prove successful. If bleeding fails, no medicines will be of much use." *Dated* 31*st December* 1837.

"The number of deaths to the admissions has been high, especially when compared with the rate of mortality in military hospitals, but in the latter there are few if any deaths from age and infirmity, or diseases consequent thereon. On this account the rate of mortality among prisoners is always higher than amongst sepoys. To this cause more than the prevalence of disease may be imputed the present high rate of mortality, as more than half of those who died were advanced in years." *Dated* 31*st December* 1838.

With regard to the diseases amongst the native troops at this station the following table has been framed, for the purpose of exhibiting the most prevalent, and most fatal diseases, and the difference in these respects amongst the sepoys and prisoners.

No. 14.—*Table exhibiting the number of admissions and deaths amongst the Native Troops stationed at Masulipatam from* 1830 *to* 1840, *exclusive of* 1832.

CLASSES.	DISEASES.	Aggregate strength. 13,660. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each class of Diseases. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	567	4	1102	2								
	,, intermit quot.	1921	22	3052	38								
	,, tertiana	189	1	281	0	2720	36	4465	45	7185	81	52 ·595	1 ·127
	,, remittens.....	36	9	19	3								
	,, com : cont....	7	0	11	2								
	Cholera	5	3	8	3	5	3	8	3	13	6	0 ·095	46 ·153
Diseases of the abdominal viscera......	Diarrhœa	52	4	86	6								
	Dysenteria......	46	5	101	15								
	Obstipatio......	108	1	134	1	241	11	390	24	631	35	4 ·619	5 ·546
	Dyspepsia......	29	1	61	1								
	Hœmorrhois....	6	0	8	1								
	Hepatitis.......	4	1	3	0	4	1	3	0	7	1	0 ·051	14 ·285
Diseases of the Lungs	Catarrhus......	26	1	34	4								
	Asthma........	17	0	45	0								
	Phthisis pulmonalis..........	3	0	8	4	54	2	92	11	146	13	1 ·068	8 ·904
	Pneumonia.....	7	1	3	1								
	Dyspnœa.......	1	0	2	2								
Diseases of the Brain.	Apoplexia.......	0	0	0	0								
	Epilepsia.......	0	0	2	0								
	Paralysis........	6	0	10	2	10	2	17	3	27	5	0 ·197	18 ·518
	Amentia,.......	1	1	1	1								
	Mania..........	2	0	4	0								
	Tetanus........	1	1	0	0								
Eruptive fevers.	Variola.........	3	0	0	0								
	Varicella.	13	0	3	0	27	0	23	0	50	0	0 ·366	0 ·000
	Rubeola.........	10	0	20	0								
	Erysipelas.......	1	0	0	0								
Dropsies....	Anasarca.......	11	3	32	4	13	5	39	5	52	10	0 ·380	19 ·230
	Ascites.........	2	2	7	1								
Rheumatic affections.	Rheumat acutus et chronicus..	410	3	469	8	410	3	469	8	879	11	6 ·434	1 ·251
Venereal affections..	Syphilis primitiva..........	103	0	109	0								
	,, consecutiva.	8	0	7	0								
	Gonorrhœa.....	45	0	24	0	170	0	159	0	329	0	2 ·408	0 ·000
	Hernia humoralis..........	9	0	18	0								
	Strictura urethræ.........	5	0	1	0								
Specific diseases.....	Dracunculus....	58	0	14	0								
	Atrophia.	17	1	31	4								
	Scorbutus.......	1	0	0	0								
	Scrophula......	7	0	7	0	109	6	165	21	274	27	2 ·005	9 ·854
	Beriberi........	22	5	108	17								
	Elephantiasis...	3	0	1	0								
	Lepra..........	1	0	4	0								
Diseases of the eye...	Morbi oculorum	28	0	45	0	28	0	45	0	73	0	0 ·534	0 ·000
Do, ,, Skin.	,, Cutis......	369	0	425	1	369	0	425	1	794	1	5 ·812	0 ·125
	Other diseases..	805	4	910	4	805	4	910	4	*1715	8	12 ·554	0 ·466
	Total..	4965	73	7210	125	4965	73	7210	125	12175	198	89 ·128	1 ·626

* Of this number were Phlogosis 787 and Ulcus 352 with 2 deaths.

Per centage of deaths to strength 1·449.

Effects of the climate of Masulipatam on European Troops.

The fort of Masulipatam having been unoccupied by European troops since 1833, and an unusual mortality having occurred in H. M. 62nd Regiment in that year, a special committee of medical officers was appointed to enquire into the causes thereof, and the substance of their report is given in the following remarks. *Dated 14th October* 1833.

" The 62d marched from Bangalore, on route to Masulipatam, on the 18th of February 1833, and continued healthy until after arriving at Chittoor, on the 1st March. The following day, a camp colour man who preceded the corps to the village of Keilgherry, was attacked with cholera, which disease continued to carry off numbers of victims daily, until the corps arrived at Woojelly near the coast, on the 13th March."

" From Chittoor to that place, a distance of about ninety miles, the disease manifested itself with the greatest severity— two officers, one hundred and forty six men, thirty women and eighteen children, having been attacked; of which number, one officer, thirty-two men, six women and twelve children died."

" The topographical features of the whole line of road, from Keilgherry to Woojelly, seem peculiarly favourable to the production of malaria, in as much as it runs between a high range of mountains, which are in many parts thickly clothed with jungle, encroaching so close on the road, that it has quite the appearance of a mountain pass. The villages on this line, are said to have been free from disease, when the regiment passed, but to have suffered from cholera, a short time previously.

" On the 13th April, the regiment arrived at Masulipatam, and was encamped on a part of the swamp, about a mile to the north-west of the fort, till the morning of the 16th of April, when the barracks were occupied."

"The fort is an irregular oblong square, of an average length of about one thousand yards, by seven hundred in breadth, the elevation above high water mark, being five feet. The height of the ramparts from the ground, on the sea face, is ten feet at the curtains, and fifteen at the bastions, the general width of the ditch, one hundred feet, and its average depth at high water, from four to five feet, but as it contains much mud and filth, if cleared out, it would be nine feet deep."

"The fort is encompassed on the north, east and west sides by the swamp; and on the south, by an inlet of the sea, the distance from which to the main gate, in a direct line is about one mile and a half. The general depth of the river opposite the fort, is from eight to nine feet, and the width at high water, about three hundred yards, but above the fort at spring tides, it expands into a swamp of several miles in extent, the soil being a slimy mud. The swamp—which is from a mile and a half, to two miles in breadth—consists of sand and mud, the sand being in greatest proportion on the western side. It is always more or less overflowed by the tide, but on some parts, there is considerable vegetation, and if the salt water was allowed to drain off, it is supposed that it would become covered with grass, to the fort gates."

"The area of the fort, contains one hundred and forty acres, about sixty nine of which is open ground, exclusive of the streets. The soil consists of clay and sand, the latter predominating, so that water soon runs off."

"The depth of wells is from about ten to twelve feet; the water is all brackish, being found to contain muriate of soda, with a little carbonate and sulphate of soda, amounting to from twenty to twenty-four grains in the pint."

"The native inhabitants it is supposed, amount to about seven thousand."

"All the drains are intended to empty themselves into the ditch, but some are at present quite choked up."

"The hospital and barracks, both for officers and soldiers, consist of threc buildings, running north and south, and are situated centrally with reference to the width of the fort, but more towards its southern side."

"The whole are substantially built of brick and chunam, the floors raised one foot eight inches from the ground, and paved with coarse red sand stone. The roofs, with the exception of one half of the officers barracks, are terraced; the dimensions of the apartments, and their construction both in the hospital and barracks are similar, with this difference, that in the hospital range, there are but eight rooms—a space at each end, being left as a passage to the privies—while in cach barrack range, there are ten rooms. The width outside is forty six feet, besides a verandah to cach range twelve feet broad; the length of the barrack range, is one hundred and ninety five feet, its height thirteen and a half, and it is divided by cross walls, having arched doors in the centre; each room has four windows, except the end rooms, which have seven, of six feet four inches high, by four fcet six inches in width, with iron bars to the street, and shutters folding inwards."

"The rooms in the hospital are capable of containing twelve patients each, those of the barrack, are intended for twenty men, or two hundred in each range; and making allowance for the sick in hospital, men on duty, and the married who reside outside, it is considered sufficient for the accommodation of 500 men."

"The hospital is partly shut in by the offices on the west side, having the main entry in the centre, and a wall of one hundred and ninety five feet in length, by ten high, on the east, meeting two others at right angles, on the north and south, by which the whole is enclosed."

"The hospital and eastern range of barracks, are separated

by a street of sixty feet wide, a street of similar width, running between the barracks and the officers range."

"The barracks are connected by a wall of one hundred and thirty feet long, by ten feet high, the whole forming an area of two thousand six hundred yards, on the south side of which, stand the kitchens and privies."

"The unusual and extreme heat of Masulipatam, in the year 1833, appears to have been occassioned by the wind blowing over the extensive tracts of dry and heated sand, situated to the north-west, and west of the fort."

"Masulipatam however has always the advantage of the sea breeze, which is denied to more inland situations."

"The annual fall of rain, as formerly mentioned, is about 35 inches."

"Mirage, is frequently seen here, and is liable to be mistaken for moist exhalations; it depends on the refrangibility of the rays of light, passing through strata of air of different densities, which bends them from the perpendicular, the heated air at the surface rising upwards, and mingling with the cooler atmosphere above."

"The general aspect of the *arrondissement*, would lead to the impression of its being a fertile source of malaria, but such is not the case, notwithstanding that sources of offensive effluvia are to be found, more particularly in the ditch of the fort, in parts where the water is shallow."

"The committee however, although disposed to question the existence of malaria, to the extent which the appearance of the more immediate vicinity of the fort might authorize, considered, that the intermittent fever which prevails at the drying up of the rains, originates in this source, and that dysentery, the prevalent disease of the wet season at Masulipatam, also derives its origin from malaria, modified or influenced, by the effect of heat and moisture."

" It would appear that dysentery occurs chiefly in the rainy season, commencing in June, and that the feverish season, is from the termination of the monsoon, until the drying up of the rains, or of the swamp ; from which time until their recommencement, is the most healthy period ; the fevers which prevail at the latter season being said to be ephemeral.—Apoplexy which is not infrequent during the hot wheather, is generally caused by unguarded exposure to the sun."

" Hepatitis is also a prevalent disease, during the hot weather, but cases are met with at all times."

" Rheumatism is most frequent during the rains, both Europeans and natives suffer alike from it; the latter also suffer from beriberi, and from dropsy, during the same season, though the climate is said, on the whole to be very favourable to them."

" The state of health of a company of European artillery, and of the Madras European regiment, stationed at Masulipatam, the former in the pettah, from 1st March 1831, to 31st August 1833, and the latter in the fort, from 1st July 1826, to 30th June 1832, is exhibited in the following table."

COMPANY OF ARTILLERY.

		Average diseases and deaths for 12 months.	Diseases.	Deaths.
Average strength	105	Apoplexy,	1	1
do admissions to do per cent.	217	Fever	9	0
do deaths to admissions	4$\frac{3}{5}$	Hepatitis	31	2
do do to strength do	9$\frac{1}{2}$	Rheumatism	6	0
		Dysentery	26	3
		Diarrhœa	12	0
		Cholera	2	2
		Other diseases	141	2

EUROPEAN REGIMENT.

		Average diseases and deaths for 12 months.	Diseases,	Deaths.
Average strength	497	Fever	138$\frac{1}{2}$	8
do admissions to do per cent.	232$\frac{3}{4}$	Hepatitis	69	4$\frac{5}{6}$
do deaths to admissions do.	3$\frac{1}{8}$	Rheumatism	91$\frac{5}{6}$	6
do do to strength do	7$\frac{1}{2}$	Dysentery	108$\frac{4}{5}$	12$\frac{1}{6}$
		Diarrhœa	60$\frac{1}{3}$	1$\frac{1}{2}$
		Cholera	18$\frac{1}{2}$	5
		Apoplexy	1$\frac{5}{6}$	1$\frac{1}{3}$
		Dropsy	3$\frac{5}{6}$	$\frac{5}{6}$
		Other diseases	622$\frac{1}{2}$	2$\frac{1}{2}$

"The sickly condition in which the 62d regiment arrived at Masulipatam, has been already noticed, and an idea of the excessive degree of heat of the season, may best be conveyed in the words of those who experienced it."

"An old resident stated, that he did not recollect so trying a season for the last thirty years, and said the thermometer for about twenty days in succession, stood from 10 to 14 degrees higher than usual."

"Captain A——, who had been four years at Masulipatam, stated that the heat was greater than he ever experienced either here or elsewhere, and said that the Europeans, eight in number, attached to his department, all married men with families, suffered more than usual—one woman and several children having died—the woman from apoplexy."

"Captain S—— observed, that the hot winds were for a short time more intolerable, than in any other year, according to his experience, and lasted longer."

"Dr. T—— considered the heat to have been infinitely greater this season, than in any other of his residence, and stated, that the hot winds from the 20th May—the date of their commencement—until the 7th June, when a heavy shower fell, were almost intolerable; that several of the European residents were affected with giddiness, and that measures were necessary to avert the consequences of such dangerous threatenings. Two prisoners in jail died of apoplexy, during that time."

"But whether the heat at Masulipatam was greater than at other stations or not, seems unimportant; the 62nd arrived after an arduous and disastrous march, whereby a large proportion of the men were much enfeebled, the physical and moral powers of all, were overstrained, and many were labouring under despondency from the loss of wives, children or comardes; which circumstances predisposed them to suffer from the effects of climate."

"The total sick in hospital at the conclusion of last quarter, 31st March—amounted to fifty eight, of which number twenty nine were cases of cholera ; this disease continued to prevail, to the extent of from one, to five or six admissions daily, till the 26th April, when it ceased; and with the exception of one case on the 3rd, and two on the 10th May, no more occurred till the 19th of the same month, from that date, till the 22nd, ten cases were admitted; and five between the 27th and 29th May. On the 20th and 21st June, two cases occurred, in men labouring under dysentery in hospital, and there was one admitted from the barracks."

"Dysentery commenced on the 25th April, from which time, one, two, or three have been admitted daily; of continued fevers, from one to six were also admitted daily, since the 17th April; a great increase however took place, on the 21st May, thirty having been admitted on that day, on which the hot winds commenced; thirty seven on the 22nd, eighteen on the 23rd, and ten on the 24th."

"Apoplexy made its appearance on the 10th April, and eight cases occurred in three days: two were admitted on the 25th April; one on the 2nd May; two on the 9th; from the 20th to 24th May there were eleven cases; in all 24 admissions, and 8 deaths."

	Admissions.	*Deaths.*
Officers..	37......	0
Men....	.939......	26
Women.	.100......	9
Children.	141......	29

"From 16th April till October, the admissions and deaths in the regiment, were as per margin."

"The result of an inquiry, instituted for the purpose of ascertaining how far the constitution of the regiment, with reference to the number of elderly or infirm men, has added to the sickness, shewed this to have exerted but a very inconsiderable effect."

"Inquiry was also particularly directed to the supplies issued to the troops, which were found to be of the best quality; and the water for their use, brought from Goodoore distant about

six miles, is pure, and is always tasted before it is admitted into the barracks, to prevent imposition."

"The accommodation, as already observed, is ample, the barracks are intended for five hundred men, and were formerly occupied by that number of the European regiment, and more lately by H. M. 45th regiment, while the strength of the 62nd, amounted to but four hundred and eighty two, of which, besides the sick in hospital, there were sixty six married men who resided without the walls, and seventy three were employed daily, on garrison and regimental duty."

"After much deliberate consideration therefore, the great sickness which prevailed subsequent to the arrival of the regiment at Masulipatam, was chiefly attributed, to the trying and disastrous circumstances of the previous march, from which all, more or less suffered, together with the subsequent very sultry season; but from the well known prevalence of dysentery, from May or June, till October, it is believed, that had the regiment, not acclimated as it was, arrived under more favorable circumstances, it would not have escaped sickness; an opinion which derives confirmation, from the circumstance, that in seventeen men who *landed from Madras*, there were no fewer than twenty admissions from acute diseases, of whom four died; viz dysentery 2, diarrhœa 1, dropsy 1."

"The committee recommended, as the impurity of the water of the ditch was believed to contaminate the atmosphere, that the tide might be admitted, to flow into it daily, and the sluices to be regularly opened; but as the clearing out of the ditch, could not fail to be a source of discomfort, and might be prejudicial to health, they advised that the troops should be moved out during the operation; the estimated expense of which work, was forty thousand rupees."

"That the drains, several of which are at present choked up, be rendered efficient, and that cess-pools be constructed."

"That the kitchen and privies, in the barrack square, be removed."

"That when practicable, the natives be transferred from the fort, their habits being filthy, and their huts serving as receptacles for prostitutes."

"The committee did not concur in opinion with the Engineer officer, that the height of the ramparts did not interfere with the circulation of the air within the fort, for although ready to admit, that in most parts the elevation is inconsiderable; that there are many open spaces, and that the streets are wide; on the sea face, the want of a free circulation of air was considerably felt; and the hospital and barracks, also being of a rectangular form, are necessarily close and confined in some parts."

"The exterior of the fort, more particularly the west side, is a deposit for all kinds of filth, brought from the barracks, hospital and streets, which is thrown out almost under the walls; and the whole of that line is rendered most offensive, from its also being *resorted* to by the native population."

"Consideringthe prevalence and severity, of hepatic and dysenteric diseases at Masulipatam, during the hot and wet months, the committee suggested, that when practicable, the relief of corps should take place in the cold season, or towards the end of the year, in order that the men might in some measure, become acclimated before the more sickly months came round."

The following table exhibits the comparative healthiness of the station, from 1813 to 1833; and some observations by the Medical Board, on submitting it to Government, are annexed.

Years.	CORPS.	Number of months at the station.	Admitted. Cholera.	Dysentery.	Fever.	Hepatitis.	Other complaints.	Total admissons.	Died.	Average annual numerical strength.	Proportion of admissions to numerical strength.	Proportion of deaths to numerical strength.
											p. cent	p. cent
1813	*H. M.'s 86th Regiment..	For 3 months	0	67	110	7	182	366	6	783	46.7	0.7
1814	,, ,, ,,	,, 12 ,,	0	337	343	52	858	1590	64	802	198.2	7.9
1815	,, ,, ,,	,, 11 ,,	0	159	228	23	529	939	28	523	179.5	5.3
1816	,, ,, ,,	,, 12 ,,	3	134	127	63	578	905	26	427	211.9	6.0
1817	,, ,, ,,	,, 12 ,,	1	170	152	39	652	1014	24	628	161.4	3.8
1818	,, ,, ,,	,, 4 ,,	0	39	37	19	205	300	8	706	42.4	1.1
1819 } 1820 } 1821 }	No European Corps stationd at Masulipatam.											
1822	Madras European Regt...	For 10 months	50	107	245	37	548	987	52	834	118.3	6.2
1823	do. do.	,, 12 ,,	33	171	616	61	956	1837	56	1086	169.1	5.1
	do. do.	,, 3 ,, }	11	46	182	27	337	603	16	782	77.1	2.0
1824	2d European Regiment...	,, 2 ,, }										
1825	No European Corps stationed at Masulipatam.											
1826	†European Regiment....	For 6 months	1	21	80	18	144	264	10	293	90.1	3.4
1827	do. do.	,, 12 ,,	1	98	146	67	1107	1419	61	515	275.5	11.8
1828	do. do.	,, 12 ,,	0	62	165	53	1148	1428	50	551	259.1	9.0
1829	do. do.	,, 12 ,,	0	134	118	75	1094	1421	24	621	227.7	3.8
1830	‡Madras European Regt..	,, 9 ,,	43	107	87	46	373	656	35	400	164.0	8.7
1831	¶do. do.	,, 12 ,,	53	157	135	101	517	963	35	451	213.5	7.7
1832	do. Left Wing	,, 9 ,, }	10	73	119	30	666	898	11	421	213.3	2.6
	and H. M.'s 45th Regt....	,, 2 ,, }										
1833	‖H. M.'s 62d Regiment..	For 9 months	118	281	359	61	518	1337	103	399	235.0	25.8

* The Europeans belonging to the garrison, including the detachment of artillery, are not introduced into this statement, the numerous sick occasionally received into the garrison hospital from other stations, or from regiments marching, greatly increasing the apparent proportion of deaths, to numerical strength.

† The regiment had returned from Ava where it had suffered severely from sickness during the war, and on the junction of recruits in March 1827, the whole corps was composed either of men of broken down constitutions, or of recruits, ever the chief victims of disease. Of the 61 deaths during the year, 51 occurred in the last 6 months.

‡ With the exception of cholera, of which 20 died, the regiment was free from any severe disease.

¶ 7 died of cholera.

‖ Few casualties occurred amongst the European troops at Masulipatam, during the year preceding the arrival of H. M.'s 62d regiment at that station. There were only two deaths in the hospital of the left wing Madras European regiment, during the first six months; in the remainder of the year, the wing was detached on foreign service, and after its return, proceeded in a few weeks, to Secunderabad. H. M.'s 45th regiment was but a short time at the station, and the numerous deaths which occurred, were for the most part from cholera, when the regiment was marching.

" The average annual proportion of deaths, to numerical strength, of all the European regiments serving under this presidency, for 7 years, from January 1813, to December 1819, was 5.690 per cent; and the average annual proportion of deaths to numerical strength, of the European regiments stationed at Masulipatam, from 1813, to 1832 inclusive, was 5.100 per cent."

" The rate of mortality having been somewhat lower, than throughout the rest of the presidency, for such a period, gives reason to conclude, that the station cannot be considered in ordinary circumstances, as unhealthy. As to the causes which have led to the extraordinary mortality in H. M.'s 62d regiment, from the period of its being stationed at Masulipatam, it is not necessary to enter into detail, the subject having been reported on at length, by the special committee, appointed for its investigation. The Medical Board have only to observe, that the period during which the sickness prevailed, was more unhealthy than usual, throughout the greater part of the presidency, that the violent epidemic cholera, from which the 62d suffered on the march, and after arriving at Masulipatam, predisposed the men to disease, and that the great drought, and intense heat, consequent on the failure of the rains, were also productive sources of disease, and on former occasions have been known to be followed by much sickness at this station."

" In a general report on the health of the European troops, dated 27th March 1809, the Medical Board observed, " At " Masulipatam, though considered an unhealthy station, from " its local situation, the averages of mortality, are lower than " at Fort St. George ; fever however is the prevalent disease " at Masulipatam, though not the one from which most casu- " alties have occurred. Flux is the most fatal disease, as at all " other stations for European troops. The average of sick- " ness and casualties, is higher in 1808, than in 1807, from " what cause the Medical Board are at a loss to say, unless " from the previous droughts, by which the swamp in the

" vicinity of the fort, which it has been so much an object of go-
" vernment to prevent being flooded, may have been drier,
" than it was in 1808; the increase of deaths is principally
" from flux, which leads to the supposition, that intemperance
" may have been a great cause of it."

" In 1793, which was a year of famine and drought, a destructive fever prevailed at Masulipatam, which was more to be ascribed to the partial drying up of the muddy bed of the river, to the south and south-west of the fort, which was usually under water, than to the putrefaction of dead bodies, to which it was then attributed."

" The season of 1833, appears to have been very similar to that of 1793. Fever, and a fatal form of apoplexy, of the same character, having carried off a number of officers and men, on both occasions, viz. at Masulipatam, in May 1833; and at the neighbouring station of Ellore, in 1793."

ELLORE.

Town of Ellore. The populous town of Ellore, is situated about 50 miles north and by west of Masulipatam, and has occasionally been a station for a native corps, but at present is only occupied by a small detachment, and by recruiting parties for some native regiments.

The country around is open and flat for a considerable extent, the soil being principally black cotton ground; in the cantonment however, it consists of sand.

Cantonment. A small and shallow river, the bed of which is dry throughout the greater part of the year, divides the town into two portions; on the right bank of the river, is the remains of an old fort, distant about one mile and a half north-east from the barracks, and the cantonment hospital. On the opposite side are the officers houses, at the distance of a mile west of the barracks. No inconvenience has arisen from the river intervening, as it is at all times fordable. The sepoys

lines are well situated, dry and commodious, and the houses in the town are generally well constructed, and of a better description than those usually seen in Indian bazaars. There is much foliage around, from the streets and roads being usually planted on either side,—and there is likewise an extensive toddy tope in the vicinity, the cause of much drunkenness, besides which there are several extensive betel gardens, which though swampy, and obstructing free ventilation, are not considered to be prejudical to the health of the inhabitants.

Climate. The climate of Ellore does not differ very materially from that of Masulipatam, already described, though from being about 30 miles inland, it does not enjoy the benefit of the refreshing sea breeze;—and the nights in particular during the months of April and May, are extremely close and oppressive; the land wind likewise during May, blows with great violence, and the thermometer has been known to rise to 110° in the house, and to upwards of 120° in officers tents.

The following account of a visit to Mullavelly, one of the seven villages in this district, near to which *diamonds* are found, is extracted from the journal of Dr. Benza on a tour through the northern circars, in January 1835—taken from the "Madras Journal of Literature and Science."

" The road to Mullavelly, lies along a sandy plain, which, I am told, is swampy during the heavy rains. Approaching the village the plain is bestrewed with blocks and fragments of a very hard conglomerate sandstone, some pieces of which are of a purplish colour. There are also some large blocks of garnetic gneiss, in a state of decomposition; but the red sandstone abounds most, although rolled pieces of quartz, with a covering of a ferruginous clay, or carbonate of iron, together with the conglomerate sandstone, are scattered over the plain.

" The hollow flat, where the diamond pits are excavated, was a low swampy plain, at the season I visited them, the

lower part only containing some water; being surrounded by a bank, or rising of the soil, in a circular manner, it has the appearance of having been once a lake. The banks are formed of the red ferruginous sandy soil, prevailing all round the place. Through this plain no river or rivulet flows, and the pools, in its lower part, dry up about the month of March, when the excavation may be commenced, and not before.

" The few hills I could see in the vicinity lie to the northward, not above two or three hundred feet above the plain, and were covered with underwood, interspersed with large trees. Some miles beyond these hillocks, runs another range loftier than the nearest ones, having however, the same direction.

" The diamond pits are in general excavated at the north end of the bank, that surrounds the hollow. Judging from some which were dry, the deepest could not be more than 12 feet; and I observed that, whatever their depth was, they never came to a hard mass of rock. The strata penetrated during the search for diamond, are, first, a gray, clayey, vegetable mould, about a foot or two thick; below this an alluvium, composed of the following pebbles, (not including the diamonds) which have evidently undergone attrition, their angles having been worn off; sandstone, similar to the one already described—quartz—siliceous iron-hornstone—carbonate of iron—felspar—conglomerate sandstone, and a prodigious quantity of kunkar, or concretionary limestone. Of this last mentioned rock, we must say a little more than of the others; the reason is obvious, namely, that the gem is the base of the acid in the calcarious stone.

" Besides the numerous pieces of this concretionary rock, scattered on the surface of the soil, and also intermixed in large quantities in the diamond alluvium, it forms regular strata, or veins we might call them, in a horizontal position both in the vegetable earth, and in the diamond alluvium, precisely like flints in chalk. Many of the pebbles of quartz

and hornstone, are not only varnished, as it were, with a ferruginous *enduit,* but it penetrates into their substance. This kunkar contains not a trace of quartz or any other mineral; and that in strata, in the vegetable soil, and in the diamond alluvium, is more friable than that exposed on the surface of the ground.

" It is in this alluvial detritus that the diamonds are found; my specimens were taken from a heap, on the brim of the last excavation, made five years ago. From this refuse, the head man told me, were obtained, as many small pieces of the gem, as might fill the hollow of the palm of the hand; no other excavation has taken place since.

" All the pits are of an irregular form; generally oblong; and said to be not more than ten feet deep; but this I could not ascertain, on account of the water, with which they were partly filled.

" The overseer who appeared an intelligent, obliging person, gave me the following information, in reply to my interrogatories; he always presides over the excavations, whether the pits are formed, or are worked on account of the Nizam. The diamond is never found imbedded, or, in any way, attached to any of the pebbles, with which they are invariably associated in this locality. They are always found loose, mixed with the other little stones. On my particularly pointing out the kunkar, he said the gem was never attached to that substance. On enquiring, which were the pebbles most constantly associated with it, and forming infallible indications of the existence of the diamond; he picked up from the heaps of detritus, the following pebbles—iron ore, hornstone and the kunkar.

" Notwithstanding the prodigious quantity of carbonate of lime in this locality, the water did not appear to contain any traces of it; and the inhabitants used even that collected in the pits.

"The detritus, forming the diamond stratum, must have proceeded from the hills north, the only ones near this place; being probably the continuation of the sandstone range, which extends easterly from Banganapilly, Condapilly and Mullavelly, in all of which localities the matrix of the diamond is a conglomerate sandstone."

COLLECTORATE OF RAJAHMUNDRY.

General description of the district.

Rajahmundry, an extensive, and for the most part a very fertile district of the northern circars, lies between the collectorates of Masulipatam on the south, and Vizagapatam on the north.—Its eastern and western boundaries being the bay of Bengal on the one side, and the range of eastern ghauts on the other. It comprises a surface of 6050 square miles, and has a population amounting to 5,33,836 souls. It is intersected by the river Godavery, which bifurcates, or divides into two branches, a short distance below Rajahmundry the chief town, and about 38 miles from the sea; the southern branch running into the bay of Bengal at Narsipore, and the northern one at Injeram.

Town of Rajahmundry.

The town of Rajahmundry is situated on the left, or northern bank of the river Godavery, in latitude 16°, 50″ north, and longitude 81°, 53″ east. It is built on somewhat elevated ground, and consists of one principal street, about half a mile in length, running nearly due north and south, in which is the chief bazaar. The houses on each side are generally of one story, built of mud, and tiled; from the principal street, there are several narrow lanes, running east and west; those to the west proceed to the bank of the river, in an oblique direction, and consist of mean houses built of mud and tiled, with here and there a large upstaired dwelling, the property of the zemindars of the district, and of some respectable inhabitants, who are principally brah-

mins.—The streets on the east side of the bazaar, are narrow and very irregular, consisting of houses of the same description, occupied by persons of various castes, but principally gentoos.

Population. The population of the town, is calculated at about from 15 to 20,000 souls, of these one fourth are brahmins, and the remainder gentoos, mussulmans and parriahs. The mussulmans form the smallest number, and are comparatively a poor race; numerous mosques however, are still standing, which show that formerly, they must have been both numerous and wealthy.

The distance from the sea by the river is 40 miles, but in a direct line only 28.

River Godavery. The Godavery at this part runs nearly north and south, having high banks on both sides, and is about a mile in breadth opposite to the town; during the south-west monsoon, it is generally filled from bank to bank, and is a beautiful expanse of water, running with great rapidity, and carrying down in its course, large quantities of mud, and *debris*, with numerous trunks of trees, &c. On the river overflowing its banks, depends the fertility of the lower part of the district, as it is the only way in which the country lying between the town and the mouths of the river, is watered; numerous small islands *or Lunkas*, are formed in its course, by the deposit left on the river subsiding; and as they are very valuable, from the quantity of tobacco of superior quality, which is grown on them, the proprietors of the ground on either side, are in the habit of planting a species of long grass, in the bed of the river, with a view to their formation, as the grass obstructs a quantity of the mud in its course, and shoots up immediately after the water subsides, thus obstructing a greater quantity of mud from year to year, until at length an island is formed. About two miles to the southward, the river divides into two branches, forming a rich delta.

During the north-east monsoon, the river dwindles to a small stream, generally fordable throughout, as far down as Cauvelasarapoorum, to which place the tides flow.

Soil. To the northward and southward of the town, the ground is low, and consists of black cotton soil, generally cultivated with paddy; to the east it rises somewhat, the soil being barren, sandy, and covered with a low stunted jungle, interspersed with topes of palmira trees.

Water. The inhabitants are generally supplied with water from the river, for all ordinary purposes, as that in the wells, of which there are but a few, is very brackish, and the several tanks in the vicinity of the town, frequently become dried up.

Food. The principal food of the people is rice, though when the crops fail, for want of rain, cholum and raggy, are much used.

Diseases. Fever prevails to a considerable extent during the hot season, or in the months of April and May; it is usually of the intermittent type, but is seldom followed by enlargement of the spleen; this disease is attributed by the natives to the use of the water, near the bank of the river, in the vicinity of the town, which becomes stagnant from the beginning of February, until the river comes down in June.

Beriberi. The disease next in prevalence to fever, is beri-beri, which is usually endemic in this place.

Excessive indulgence in the use of opium and tobacco, is common amongst all classes, from the brahmin to the parriah, and by habit they become actual necessaries of life.

Prevailing winds. The prevailing wind during the months of January and February, is northerly, and occasionally from the east, towards the afternoon: in the month of March it is generally southerly, or south-easterly, the sea breeze being felt for a few hours in the afternoon, usually followed

by a calm. In April and May, the wind is either westerly or south-westerly, very hot, and loaded with fine sand; in June it again becomes more southerly, and is supposed to be influenced by the river coming down, for when the change occurs earlier or later, the river is expected to fill simultaneously, which generally happens about the middle of June. The wind continues southerly with little change, until October, when the north-east monsoon sets in, soon after which the river begins to subside, and from that time until March, the station is particularly healthy.

Fort and public buildings.

The fort is situated to the north of the town, and is in the form of a square, having high mud walls, and a ditch now partially filled up. It is usually garrisoned by two companies of the native regiment stationed at Samulcottah; the barracks, hospital, jail, magazine, and lines of the detachment, are within the fort. The barracks are situated in the south-east corner, and consist of one long mud building, with a tiled roof, and is only used as a place of arms; it is 83 feet long by 13 wide, and 7½ high, having three doors, and five small windows.

The hospital, close to the barrack, is a long narrow building, erected on slightly rising ground, immediately under the wall of the fort; it is open and airy—two large tamarind trees stand in the north-west corner, which are a great shelter to it during the rainy season.—It is 100 feet long by 13 broad, and 12 feet high, is built of mud, has a tiled roof, a verandah of 7½ feet wide on the west side, and a low narrow verandah on the east, or that looking towards the barracks. There is a small confined room in the rear, which is used as a surgery, and is about 10 feet by 8. The lines occupied by the detachment consist of four rows of thatched huts, immediatcly in front of the barracks, they are of a very infcrior description, and placed in a confined space, but as the dctachment is relieved every third month, the sepoys do not in consequence erect good houses, or care to make themselves more comfortable, as they must be considerable losers

thereby. The barracks, hospital and lines, would be much improved, if the old fort walls were taken down. The magazine was formerly a small native temple, built of large slabs of black granite, and is well adapted to its present use.

Jail. The jail is a square building in the centre of the fort; it was first erected in 1806, and underwent little change until 1838, when two new cells were added, each 43 feet long, and 14½ wide, having five windows and two doors, the windows being 4 by 2½ feet. The wards are 13 feet high, and bombproof. The old jail contains an area of 228 feet, by 140, surrounded by a wall of 12 feet in height, within which, there are 14 wards or apartments, and a cookroom and guard rooms, for the sepoys, and peons on duty; each cell is 28 feet by 14, with walls 13¾ feet high—and has four windows and two doors. The windows are 4 feet from the floor, and measure 3 feet by 2—there are also several small slits or scuttles in the walls, thereby causing free ventilation. There are four other cells similar to those described, each 23¼ feet by 13¼, and 13 feet high, built on a level space, about 4 feet higher than the others, at the end of which, and under the same roof, are two small cells formerly appropriated for lunatics; on the same level, and on the north end, is a small ward formerly occupied as an hospital, with one door and two venetian windows, 19 feet by 9, and 14½ feet high. There is also another room of the same dimensions occupied by the female prisoners,—and a cell 15 feet by 12, with two venetian windows and two doors, for the confinement of civil prisoners.

The verandah allotted for the military guard and peons, is 83 feet long, and 9 feet broad. There are two large tanks near the jail, which are now useless from being out of repair.

The jail is calculated to hold about 400 men, allowing each 2¼ feet, and is built of the most substantial materials, the floor of each cell is flagged with large flat stones. The building is fire proof, there being no wood in its construction, except the doors and windows. The situation is well raised and dry.

Within the fort is the court-house, and also two small bungalows for European officers.

In the following tables are shewn the nature of the diseases and amount of mortality which have occurred amongst both classes of prisoners, during the period of ten years, from 1829 to 1838 inclusive ; they also exhibit the diseases classified, and point out the per centage of sick to strength, and of deaths to sick treated.

Remarks on the tables.

The average annual numerical strength of the convicts has been 137, and the admissions into hospital 100 ; or 73·542 per cent; the average number of deaths yearly has been exactly 20, or 14·723 per cent on the strength.

Amongst the prisoners waiting for trial, from an aggregate strength of 817, not more than 428 admissions have taken place, being 52·386 per cent on the strength ; while 116 deaths have occurred, being 14·198 per cent.

The most numerous admissions amongst both classes of prisoners, have been from *fevers, cholera, bowel complaints, eruptive fevers, anasarca, atrophy, and beriberi;* and the greatest mortality has been produced by the same diseases, as the table No. 17 will clearly shew. This table gives at one view the annual admissions and deaths from seven of the principal diseases, viz. fever, cholera, diarrhœa, dysentery, anasarca, atrophy and beriberi; the total sick treated and mortality each year are also exhibited, as in the corresponding table for the Masulipatam jail, for the purpose of shewing the great proportion of the whole mortality caused by these diseases ; no less than 295 out of 318, or 13-14ths of the whole mortality.

JAIL OF RAJAHMUNDRY.

No. 15.—*Table exhibiting the number of admissions and deaths of the Convicted Prisoners, from each class of Diseases, for ten years.*

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength. 1,372.				Admissions and Deaths from each class of Diseases.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
		1st Half.		2d Half.		1st Half.		2d Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers......	Febris int. quot.	114	6	148	7	123	6	158	11	281	17	20 ·481	6 ·043
	,, tertiana	4	0	4	0								
	,, remittens.....	5	0	2	0								
	,, continua......	0	0	4	4								
	Cholera	13	7	6	4	13	7	6	4	19	11	1 ·384	57 ·834
Diseases of the abdominal viscera......	Diarrhœa	45	11	93	36	86	20	210	62	296	82	21 ·574	27 ·702
	Dysenteriaacuta et chronica...	41	9	117	26								
	Hepatitis acuta et chronica...	0	0	6	0	0	0	6	0	6	0	0 ·437	0 ·000
Diseases of the Lungs	Catarrhus......	6	0	0	0	7	1	0	0	7	1	0 ·510	14 ·255
	Phthisis pulmonalis..........	1	1	0	0								
Diseases of the Brain.	Paralysis........	1	1	0	0	1	1	0	0	1	1	0 ·072	100 ·000
	Amentia,.......	0	0	0	0								
Eruptive fevers......	Variola.........	12	1	18	3	41	1	21	3	62	4	4 ·518	6 ·451
	Varicella.	29	0	3	0								
Dropsy......	Anasarca.......	9	7	22	11	9	7	22	11	31	18	2 ·259	58 ·064
Rheumatic affections.	Rheumat acutus et chronicus..	21	3	18	1	21	3	18	1	39	4	2 ·842	10 ·256
Venereal affections..	Syphilis primitiva..........	2	0	3	0	2	0	4	0	6	0	0 ·437	0 ·000
	Hernia humoralis...........	0	0	1	0								
Specific diseases.....	Atrophia........	35	18	92	36	47	21	111	40	158	61	11 ·516	38 ·607
	Beriberi........	12	3	19	4								
Diseases of the eye...	Morbi oculorum	3	0	2	0	3	0	2	0	5	0	0 ·364	0 ·000
Do, ,, Skin.	,, Cutis......	4	0	3	0	4	0	3	0	7	0	0 ·510	0 ·000
	Other diseases..	28	1	63	2	28	1	63	2	91	3	6 ·632	3 ·296
	Total..	385	68	624	134	385	68	624	134	1009	202	73 ·542	20 ·019

JAIL OF RAJAHMUNDRY.

No. 16.—*Table exhibiting the number of Admissions and Deaths of the Prisoners under trial, from each class of diseases, for ten years.*

CLASSES.	DISEASES	1829 to 1838. Aggregatestrength 817. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Totaladmissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris int. quot.	24	1	29	0	24	1	29	0	53	1	6 ·487	1 ·886
	Cholera........	10	4	28	18	10	4	28	18	38	22	4 ·651	57 ·894
Diseases of the Abdominal viscera.......	Diarrhœa......	20	11	17	4	63	25	46	17	109	42	13 ·341	38 ·532
	Dysenteria acuta et chronica	43	14	29	13								
	Catarrhus......	1	1	0	0	1	1	0	0	1	1	0 ·122	100 ·000
Eruptive fevers......	Variola.........	5	2	32	5	24	2	39	5	63	7	7 ·711	11 ·111
	Varicella.......	19	0	7	0								
Dropsy.....	Anasarca.......	7	5	8	3	7	5	8	3	15	8	1 ·835	53 ·333
	Rheumat acutus et chronicus..	5	0	1	0	5	0	1	0	6	0	0 ·734	0 ·000
Venereal affections....	Syphilis primitiva..........	5	0	5	0	5	0	6	0	11	0	1 ·346	0 ·000
	Hernia humoralis.........-..	0	0	1	0								
Specific diseases.....	Atrophia........	14	8	15	10	47	20	34	13	81	33	9 ·914	40 ·740
	Beriberi........	33	12	19	3								
	Morbi oculorum	1	0	1	0	1	0	1	0	2	0	0 ·244	0 ·000
	,, cutis....	0	0	1	0	0	0	1	0	1	0	0 ·122	0 ·000
	Other diseases..	32	0	16	2	32	0	16	2	48	2	5 ·875	4 ·172
	Total..	219	58	209	58	219	58	209	58	428	116	52 ·386	27 ·102

Table No. 17 Jail of Rajahmundry.		1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Convicts.	Fever	23	1	27	1	10	1	11	3	26	1	82	6	21	3	13	0	31	0	37	1	281	17
	Cholera	0	0	0	0	0	0	16	9	3	2	0	0	0	0	0	0	0	0	0	0	19	11
	Diarrhœa	6	1	3	1	6	4	4	2	17	4	94	34	2	0	0	0	4	0	2	1	138	47
	Dysentery	3	1	7	0	5	3	13	2	27	10	66	15	6	0	5	8	19	1	7	0	158	35
	Anasarca	5	3	1	1	1	2	3	3	9	4	6	5	2	0	0	0	2	0	2	0	31	18
	Atrophia	2	2	1	1	2	0	4	3	9	6	98	36	5	4	3	1	0	0	3	1	127	54
	Beriberi	0	0	1	0	0	0	0	0	0	0	2	1	2	0	12	3	5	1	9	2	31	7
	Admissions and deaths from these diseases.	39	8	40	4	24	10	51	22	91	27	348	97	38	7	33	7	61	2	60	5	785	189
	Total admissions and deaths	43	8	72	8	41	11	67	23	179	31	375	98	50	9	40	7	70	2	72	5	1009	202
	Strength each year	126		145		96		127		272		269		116		76		73		72		1372	
Under Trial.	Fever	0	0	0	0	0	0	4	0	6	0	13	1	9	0	10	0	2	0	9	0	53	1
	Cholera	0	0	0	0	0	0	28	21	4	1	6	0	0	0	0	0	0	0	0	0	38	22
	Diarrhœa	0	0	2	1	0	0	2	1	10	8	21	5	1	0	0	0	1	0	0	0	37	15
	Dysentery	1	1	2	1	1	0	3	1	33	13	21	10	2	0	2	1	4	0	3	0	72	27
	Anasarca	0	0	0	0	0	0	0	0	3	1	9	6	1	1	2	0	0	0	0	0	15	8
	Atrophy	0	0	0	0	0	0	1	1	7	6	19	10	1	0	1	1	0	0	0	0	29	18
	Beriberi	0	0	0	0	0	0	0	0	0	0	1	0	5	1	29	9	5	1	12	4	52	15
	Admissions and deaths from these diseases.	1	1	4	2	1	0	38	24	63	29	90	32	19	2	44	11	12	1	24	4	296	106
	Total admissions and deaths	4	1	13	4	7	0	64	25	139	35	91	32	19	2	47	12	13	1	28	4	428	116
	Strength each year	45		64		54		122		306		108		40		23		26		29		817	
Admissions and deaths amongst both classes of prisoners		47	9	85	12	48	11	131	48	318	66	469	130	69	11	87	19	83	3	100	9	1437	318
Total strength each year		171		209		150		249		578		377		156		99		99		101		2189	
Per centage of deaths to strength		5	·263	5	·741	7	·333	19	·277	11	·418	31	·482	7	·051	19	·191	3	·030	8	·910	14	·527
Per centage of sick to strength		27	·485	40	·669	32	·000	52	·610	55	·017	124	·668	44	·230	87	·878	83	·838	99	·009	65	·646
Per centage of deaths to sick treated		19	·148	14	·117	22	·916	36	·641	20	·751	27	·718	15	·942	21	·839	3	·614	9	·000	22	·131

No. 18.—*Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Rajahmundry, from* 1829 *to* 1841 *inclusive.*

CLASSES,	DISEASES.	Aggregate strength 2,223. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of diseases. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers.	Febris ephemera	0	0	1	0								
	,, intermit quot.	102	1	124	6								
	,, tertiana.......	1	0	12	0	109	2	150	11	259	13	11 ·650	5 ·019
	,, remittens.. ...	5	1	7	0								
	,, continua......	1	0	6	5								
	Cholera........	9	5	13	4	9	5	13	4	22	9	0 ·989	40 ·909
Bowel complaints. ..	Diarrhœa......	1	0	6	0	11	0	18	0	29	0	1 ·304	0· 000
	Dysenteria acuta et chronica	10	0	12	0								
Diseases of the Lungs	Catarrhus......	2	0	7	0								
	Asthma........	2	0	4	0	4	0	12	0	16	0	0 ·719	0 ·000
	Phthisis pulmonalis..........	0	0	1	0								
	Paralysis.......	1	0	0	0	1	0	0	0	1	0	0 ·044	0 ·000
Eruptive fevers......	Variola.........	0	0	2	0	2	0	2	0	4	0	0 ·179	0 ·000
	Varicella.......	2	0	0	0								
Dropsies...	Anasarca.......	2	0	7	1	3	1	8	1	11	2	0 ·494	18 ·181
	Ascites.........	1	1	1	0								
	Rheumatismus..	46	0	42	0	46	0	42	0	88	0	3 ·958	0 ·000
Venereal affections...	Syphilis primitiva..........	28	0	30	0								
	,, consecutiva..	0	0	1	0								
	Hernia humoralis..........	5	0	9	0	33	0	41	0	74	0	3 ·328	0 ·000
	Strictura urethræ.........	0	0	1	0								
Specific diseases.....	Dracunculus....	0	0	1	0								
	Atrophia.......	1	0	5	0								
	Scorbutus......	1	0	0	0	10	1	37	2	47	3	2 ·114	6 ·382
	Scrophula......	0	0	1	0								
	Beriberi........	8	1	30	2								
Diseases of the eye...	Morbi oculorum	1	0	7	0	1	0	7	0	8	0	0 ·359	0 ·000
Do, ,, Skin.	,, Cutis......	12	0	4	0	12	0	4	0	16	0	0 ·719	0 ·000
	Other diseases..	84	0	58	2	84	0	58	2	*142	2	6 ·387	1 ·408
	Total..	325	9	392	20	325	9	392	20	717	29	32 ·253	4 ·044

* Of this number were Phlogosis 15, ulcus 37.
Per centage of deaths to strength 1·301.

General description.

Samulcottah, a town and military station in the Rajahmundry district, is situated in latitude 17°, 4″ north, and longitude 82°, 17″ east, being 404 miles in a north-east direction from Madras, and 28½ miles east of Rajahmundry.

The word *Cottah* means fort, *Samula* being that of a devotee from whom the place derived its name. Before Samulcottah was ceded to the East India Company by the Nizam in 1766, it was the residence of the ancestors of the present Rajah of Peddapore, and part of the palace which was converted into a dwelling house, is still standing. It was the original intention of government to have occupied the village of Peddapore, two miles distant to the westward, as a military station, but the idea was subsequently abandoned, Samulcottah having been found more convenient, and the Rajah was induced to change his place of abode to Pettapore a village about eight miles to the south-east. Samulcottah till 1835, had a fort of some strength, at which time, in consequence of the offensive state of the ditch, and the rank vegetation, completely obstructing the free circulation of air, it was levelled to the ground, and the ditch filled up.

Cantonment.

The cantonment is situated on the north-west side of the village, and contains an area of about three quarters of a mile in diameter; and both it and the village stands about 70 or 80 feet above the level of the sea, which is distant at one of the nearest points, Cocanada, about eight miles.

Roads.

The road to Cocanada passes through a cultivated plain forming almost a perfect level, and through which a small river runs to the sea.

Samulcottah is accessible on all sides, by pretty good roads; the great northern, or Madras road, from Rajahmundry, is of considerable width, and in good repair, and enters the cantonment on its western side. The other roads are neither so wide, nor so well adapted for wheeled carriages. To the north a good driving road, leads to a small village distant about one mile, called Rayumpettah.

Half a mile beyond the village of Peddapore, on the west of Samulcottah, is a small hill called Pandaoonla-metta, which consists of a rock about 100 feet in height, and the same in diameter, rising abruptly from the plain.

Eastern ghauts. To the northward of Samulcottah at the distance of 30 miles, run the line of hills, called the eastern ghauts, which rise to the height of 2000 feet. The names of the several ghauts or passes, are chiefly derived from those of the Rajahs who are in possession of them, but who may perhaps in some instances have originally taken theirs, from these natural objects.

These hills are extremely feverish, and almost uninhabitable by the natives of the coast; the people who live on them are a wild uncivilized race, and some mahomedans from thence, who have lately been met with in the plains, scarcely spoke a word of Hindoostanee, or were intelligible in their own language, so much had it become corrupted by intercourse with the aborigines; like other hill races, they are of moderate stature, but muscular and well formed.

There are no rivers or lakes of importance near Samulcottah, the river to the eastward of the cantonment, is a dry sandy bed, except in the monsoon, when it is full from bank to bank, though at all times fordable.

Tanks & Wells. There are but few tanks in the neighbourhood, and those which are met with are of a small size, and become entirely dried up in the hot season.

Wells are numerous, but there are only two in the cantonment, the water of which is drinkable, the others contain carbonate and muriate of lime, and also muriate of soda, some of them being even offensive to the smell. Water is usually found at a depth of from 30 to 40 feet below the surface.

Soil. The soil is alluvial, generally well adapted for both wet and dry cultivation, and is very productive.

At a depth varying from six to twenty feet, a bed of gravel is met with, of various thickness containing masses of lime stone, mixed with comminuted portions of quartz. There is no jungle or stagnant water in the neighbourhood and no noxious exhalations are supposed to arise from the soil.

Vegetable productions. The ordinary country vegetables and fruits, are produced in abundance, and most of the European vegetables found in India, likewise thrive well.

The Swietenia febrifuga is found in a compound, formerly the garden of the late Dr. Roxburgh; the trees are almost entirely denuded of their bark by the natives, who put much faith in its virtues as a remedy in fever.

Animals. The usual domestic animals, and cattle are abundant. Sheep do not attain a large size, but the mutton is usually good and cheap; good beef is not to be had, but poultry of all kinds are very abundant.

Foxes, hares and antelopes are found in great nnmbers around the cantonment, which is visited at night by numerous troops of jackalls, and occasionally by hyænas.

Minerals. Minerals do not occur in any considerable variety; strata of gravel and lime stone, as also quartz have already been mentioned. Slabs of gneiss of a dark gray colour traversed by veins of quartz, are seen in some houses, which it is believed have all been brought from near Rajahmundry.

Diseases. The inhabitants are generally very healthy, and many of them reach to an advanced age; and brahmins of nearly 80 years of age, in the perfect possession of their faculties, are to be met with. The principal endemic complaiuts are fevers, and ulcers;—large and deep ulcers of long duration have been seen, and the native practitioners it may be inferred, do not therefore possess much skill in the treatment of these complaints, which are found to yield readily to European remedies. As a consequence of severe or ill treated fever many persons from the more inland parts of the country, suffer

from diseased spleen and dropsy. Venereal disease exists to a great extent in the village, and secondary symptoms are common. Beriberi is an endemic disease of the place but the inhabitants are not so subject to it as the troops and many of the natives do not even know the name of the disease.

Barracks. The barracks or place of arms, situated at the south side of the cantonment, were erected about 1786, and are built of brick and chunam, the whole being under one tiled roof. At the western extremity is a small building used as a regimental store room, and about 200 yards to the south-west is a tank, the water of which is used by the sepoys, whose lines are a little further on, in the same direction. The barracks are built on hard, gravelly and elevated ground; the aspect of which has been judiciously selected, as the force of the north-east, and south-west monsoons, are broken upon the ends of the building.

The following are the dimensions of the barrack, height 8½ feet—length 162½ by 18½, with a verandah 7 feet 8 inches wide; it has 4 windows—and 6 doors. In front is an open space of ground, the original square of the fort, the sides of which are formed by the officers quarters; this piece of ground is large enough for manœuvering a regiment; on its western side is the powder magazine, a bomb-proof building.

The officers houses generally run in a north and south direction, and open to the full force of the monsoon; the doors and windows of which must be kept constantly shut on the side from which the monsoon blows. From being exposed likewise to the glare and heat of the rising and setting sun, as well as for the other reasons stated, this is evidently an injudicious arrangement in a tropical country.

There are fourteen houses for the officers, and a mess house, of these nine are the private property of the occupants.

They are generally of an inferior description and badly built, the usual material being mud walls, with grass for the roofs. There is only one tiled dwelling in the cantonment;

and house rent is exceedingly moderate, 15 Rupees per mensem being the average monthly charge.

Sepoys lines. The sepoys lines are to the westward of the officers quarters, the ground gradually rising towards them, and a little beyond their limits, it attains to a height of 128 feet above the cantonment; from whence there is an open plain for some distance. Towards the eastward, the side of the cantonment in which the hospital is situated, the ground falls considerably, so that this building is in the lowest and most objectionable situation.

Hospital. The hospital was erected about the year 1786, runs east and west, and is built of burnt brick and chunam, having a tiled roof. The ground from the front of the barrack, slopes gradually to its eastern angle, and in wet weather the whole of the rain water from the square, sweeps towards it; it is moreover rather close to the officers quarters, and too distant from the mens lines and barracks. It contains only one ward for patients, and a surgery. The following are the dimensions, height 8½ feet, length 56, and breadth, 16; it has 6 windows and 2 doors; the surgery is 14½ long, 16 broad and 8½ feet high, and has one door and a window.

The building can accommodate 30 patients, and notwithstanding its being so badly situated, none of the sick have ever laboured under any disease, which could be attributed to the locality. About 150 yards to the north, stands a solitary cell, having two rooms, each for one prisoner.

The parade ground is to the north of the regimental lines and only divided from them by a road; it is open, has a gentle slope and is well adapted for the purpose, being sufficiently near both to the barracks and the officers quarters.

The following table shews the nature and amount of diseases, and the mortality which have occurred amongst the native troops during a period of ten years, from 1831 to 1841, exclusive of 1832.

No. 19.—Table exhibiting the number of admissions and deaths amongst the native Troops at Samulcottah, from 1831 *to* 1841, *exclusive of* 1832.

CLASSES.	DISEASES.	Aggregate strength 7613. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Diseases. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	57	0	71	0								
	,, intermit quot.	560	7	494	5								
	,, tertiana	10	0	15	0	681	11	617	11	1298	22	17 ·049	16 ·949
	,, remittens.....	45	2	19	1								
	,, com. cont....	9	2	18	5								
	Cholera	13	4	13	5	13	4	13	5	26	9	0 ·341	34 ·615
Diseases of the abdominal viscera......	Diarrhœa	33	2	56	1								
	Dysenteria......	26	2	39	4								
	Obstipatio......	13	0	12	0	80	5	121	5	201	10	2 ·640	4 ·975
	Dyspepsia......	7	1	12	0								
	Hœmorrhois....	1	0	2	0								
	Hepatitis.......	2	0	1	2	2	0	1	2	3	2	0 ·039	66 ·666
Diseases of the Lungs	Catarrhus......	7	0	19	1								
	Asthma.........	8	2	11	0								
	Phthisis pulmonalis..........	0	0	4	3	20	2	38	4	58	6	0 ·761	10 ·344
	Pneumonia.....	3	0	0	0								
	Dyspnœa.......	2	0	4	0								
Diseases of the Brain.	Apoplexia......	1	1	1	1								
	Epilepsia.......	1	0	0	0								
	Paralysis........	1	0	3	0	11	2	12	1	23	3	0 ·302	13 ·043
	Amentia,.......	4	1	2	0								
	Mania..........	4	0	6	0								
Eruptive fevers......	Variola.........	21	2	9	1								
	Varicella.......	22	0	4	0	50	3	34	1	84	4	1 ·103	4 ·761
	Rubeola........	7	1	20	0								
	Erysipelas......	0	0	1	0								
Dropsies...	Anasarca.......	5	1	6	0	7	2	9	1	16	3	0 ·210	18 ·750
	Ascites.........	2	1	3	1								
	Rheumatismus..	217	1	239	1	217	1	239	1	456	2	5 ·989	0 ·438
Venereal affections..	Syphilis primitiva..........	109	0	91	1								
	,, consecutiva ..	3	0	7	0								
	Gonorrhœa.....	20	0	21	0	143	0	143	1	286	1	3 ·756	0 ·349
	Hernia humoralis..........	10	0	23	0								
	Strictura urethræ.........	1	0	1	0								
Specific diseases.....	Dracunculus....	1	0	4	0								
	Atrophia........	3	1	14	1								
	Scrophula......	3	0	5	0	29	2	92	11	121	13	1 ·589	10 ·743
	Beriberi........	21	1	68	10								
	Lepra..........	1	0	1	0								
Diseases of the eye...	Morbi oculorum	19	0	35	0	19	0	35	0	54	0	0 ·709	0 ·000
Do, ,, Skin.	,, Cutis......	198	0	138	0	198	0	138	0	336	0	4 ·413	0 ·000
	Other diseases..	466	0	495	3	466	0	495	3	*961	3	12 ·612	0 ·312
	Total..	1936	32	1987	46	1936	32	1987	46	3923	78	51 ·530	1 ·988

* Of this number were Phlogosis 318.
,, ,, Ulcus...144 and 1 death.
Per centage of deaths to strength 1·024.

VIZAGAPATAM.

General description of the district.

The district or Collectorate so called, extends along the coast between 17° 10″, and 18°30″ of north latitude; and 84° 10′, and 82° 30″ of east longitude; being bounded on the east by the bay of Bengal, on the west by the eastern ghauts, at an average distance of from 30 to 40 miles from the sea; and on the south and north, by the districts of Rajahmundry and Ganjam respectively.

The general appearance of the country differs considerably from the southern portion of the division, being irregularly mountainous and hilly, the coast for the most part, being a bold and rocky shore; the hills in some places, as at the Dolphin's nose, to the south of Vizagapatam, over-hanging th e sea.

The hills lying to the westward of Vizagapatam which approach to within three or four miles of the town, extend far into the district, towards the Hyderabad territory; and those to the southward, to a distance of about 30 miles, where the country becomes flat and continues so, as far as the Rajahmundry district. The hills, many of which are from 1500 to 2000 feet in height, are generally clothed with low jungle to their summits; extensive, fertile and highly cultivated valleys, lying between them, in which are grown rice, and a variety of dry grains.

Population.

The district comprises an area of 15,300 square miles, with a population amounting to 1,047,414 souls.

Rivers and lakes.

The rivers and lakes are not of great extent, or importance. The river Pundavoo takes its rise in Golcondah, and enters the sea after a course of about 33

miles, near the village of Wootadah. The Sharadah, rises in the hills west of the Vizianagrum district, and runs south-east towards Wootadah, where it also enters the sea, after a devious course of nearly 70 miles. The Goostunny river also takes its rise in the hills west of Vizianagrum, and runs east to Bimlipatam, where it joins the sea. The Chinpavuttah rises in the north-west of the district, and runs eastward to the sea at Conadah. The river Langlah also rises in the hills, in the north-west by three separate heads, which unite a few miles west of Polcondah, close by which village it runs, and joins the sea at the north-east corner of the Collectorate, at the village of Dhurmaveram. Tanks are numerous, but there are only two lakes of any considerable extent; one near to Konda-churlah, of about two miles, and another near Benavoolo of three mlles in circumference. There is likewise a marsh of several miles in extent, south of the village Wontemaumdee, running parallel with the coast, which as well as the lakes, abound with great varieties of water-fowl.

Climate. The climate is considered salubrious, and Vizagapatam was formerly much resorted to by visitors, from inland stations during the hot months, but to persons long resident there, the climate is found to be very relaxing, the air being soft and the prevailing winds generally, either the along-shore, or south-east wind, or the easterly; it may be added, that land winds are almost unknown, particularly during the day, being intercepted by the neighbouring hills.

Months.	Average height of Thermometer	Average height of Barometer.	Remarks.
January........	70° 0′	30° 0′	The temperature is at the lowest about the 10th, the wind being generally from the north-east, veering towards the east and south-east. The Minimum of the thermometer is 60° Heavy dews, weather serene, rain and lightning, almost unknown.
February........	73° 0′	30° 1′	Not so cold as January though pleasant. Heavy dews, and occasional fogs throughout the month, the sky very clear, no rain or lightning, wind north-east, with frequent changes to the south-east.
March..........	79° 0′	30° 0′	The along-shore or south-east wind sets in during this month, and renders the air damp and sultry. Sky continues clear, little or no dew.
April	83° 0′	30° 0′	Wind towards the end of the month changes to the south-west, and blows with considerable violence. Dew and rain are almost unknown.
May............	87° 0′	29° 9′	The south-west wind continues, with heavy gusts, throughout the month. Land winds blow for about three days in the month, and usually alternate with the sea breeze.
June............	87° 0′	29′ 8′	The south-west rains begin to set in about the first week and become more frequent towards the end of the month, and the sky is generally cloudy.
July............	82° 0′	29° 9′	Rain more abundant than in last month. Wind from the same direction. Large masses of flying clouds seen in every direction. No sea breeze. Lightning and thunder occasionally.
August..........	82° 0′	29° 9′	Wind more westerly, and the rains are heavier. Thunder and lightning occur more frequently. The heat is much reduced, but the calms peculiar to this month, are very oppressive. Continues cloudy.
September......	80° 0′	29° 9′	The wind, rain and appearance of the weather, continue the same as in August, until about the 15th, when the north east rains set in partially, and become heavy towards the end of the month, thunder and lightning are frequent; oppressive calms still occur.
October........	79° 0′	30° 0′	The north-east rains continue with great force throughout this month. The wind blows very fresh, sometimes amounting to a gale, and veering in every direction. Thunder and lightning occur frequently. The clouds assume a heavy appearance. becomes cool towards the end of the month.
November......	77° 0′	30° 1′	The rains cease about the middle of this month. Thunder and lightning seldom occur The sky assumes a clear and serene appearance, and the weather becomes pleasant.
December......	73° 0′	30° 1′	The wind still from the north-east and east. The sky has a clear and tranquil aspect. Rain and lightning are seldom known, but towards the latter end of the month heavy clouds are often seen.

Vegetable Products.

The products of the district, are principally rice and dry grain which are exported in large quantities to several parts of the coast, much of the rice being also sent to the Mauritius. Arrow root and a dye called Vapuntagoondah, grow wild on the hills, in great abundance.

Manufactures and trades.

The manufactures are chiefly punjums, and coarse cotton cloths—and from the latter, tents of

REFERENCE

a Arsenal.
b. Zillah Court House.
c Pay Office.
d. Magazine.
e. Arrack Godown
f. Solitary Cells
g. Proposed Barrack.
h. European do
i. Congee House.
l Store Room.
n New Hospital.
o. European Veteran Families
p.p. Guard Rooms.
q Native Infantry Lines.

of a superior description are made; the export trade in cloth has however of late years fallen much into decay, from the produce being undersold by cloth from the English market. Indigo to a small extent is also manufactured.

Vizagapatam has long been celebrated throughout India for its manufactures, in silver, ivory, and buffaloe-horn; ornamental boxes, jewellery and other articles in great variety, being made up in considerable quantities.

Numbers of cooly emigrants to the Mauritius have lately been furnished from this district, and it has long been famed for its hardy race of palanquin bearers, from whence all parts of the presidency are chiefly supplied with these useful servants.

The only Military stations in the collectorate are, Vizagapatam, the residence of the principal civil and military authorities, and Vizianagrum; which is usually occupied by one, and occasionally by two native regiments, with a detachment of Golundauze or native foot artillery.

Description of the station and Town.

The station of Vizagapatam is situated on the coast, in north latitude 17° 41″, and east longtitude 83° 42″, in a small bay, the southern extremity of which is bounded by a remarkable hill, several hundred feet in height, called the "Dolphin's nose;" and its northern extremity by the village of Waltair; the breadth a cross the bay being about six miles; see plan annexed.

Fort.

The station consists of a fort, lying in the south-western part of the bay, being separated from the Dolphin's nose by a small river, which forms a bar, where it enters the sea, but is passable for vessels of from 150 to 200 tons burden, during spring tides. Within the fort are the barracks for the European invalid soldiers, the arsenal, the officers quarters, and various public buildings. The works are at present much out of repair, the rampart on the eastern face being partly undermined by the sea, during the violence

of the north-east monsoon. Immediately outside the fort gate, and in an open space from near to which the pettah commences, is the garrison and European veteran company hospital, an upstair building, which is in every respect well adapted for the accommodation of the sick.

Native town. The native town, immediately adjoins the fort on its north and west sides. It contains many good streets, and numerous well built houses; but is much crowded, from the space on which it stands being shut in by a range of sand hills, between it and the sea on the one side, and an extensive swamp on the other. Beyond the limits of the town, are the lines of the native regiment stationed here, and further on in a north-easterly direction, the suburb called Waltair, extending about three miles along the coast. In this direction most of the military officers, including the General commanding the division, and staff, and all the civil officers of the station, reside. An excellent carriage road runs from the extreme end of Waltair to the fort, a distance of about four miles. The northern or Waltair side of the cantonment, is elevated considerably above the town, and is consequently thought to be cooler, and there being no space allotted for the houses of the officers of the native regiment, they are consequently much dispersed over the vicinity.

Regimental lines.

The parade ground on the right of the sepoys lines, is a square piece of ground, on one side of which are the barracks and native hospital. It is bounded on the south by the swamp before mentioned, about nine miles in circumference, and which from having a free communication with the sea is inundated at every tide, thereby preventing offensive effluvia to any great extent. On the north side it is bounded by extensive plantain gardens, in rear of the barracks and hospital, which are considered unhealthy, from the foliage being so thick as to obstruct the free circulation of air; the east side, is partly bounded by the road leading to the town, and partly by a large tank, which contains water throughout

the year; on the west is the village of Ullipooram, the *dhobies* washing ground, and the principal burning ground, or that used by the natives for the purpose of cremation.

Soil. The soil in the immediate vicinity of the station, on the higher ground, is barren, and principally composed of a reddish gravel, with here and there large slabs of a very hard description of gray granite, but in lower situations, it is a rich, and productive loam.

Barracks and hospital. The barracks and hospital are both situated on the same line, at the upper part of the parade ground, the former in the centre, and the latter 53 yards to the right. The barracks contain four apartments, one of which is appropriated for the regimental stores, one as the government treasury, and the other two, as places of arms.

The hospital consists of one long ward, surrounded on three sides by an elevated open verandah ten feet broad, the fourth being partitioned off for a surgery. The ward is 101 feet in length by 14½ in breadth, it has six doors and ten windows; there are also two small ventilators at the right end, placed near the roof, which is sloping and tiled. The hospital is capable of containing about 50 patients; and when the accommodation is insufficient for the sick, tents are usually pitched for their use.

Jail. The jail, first occupied as such in 1832, was formerly a Dutch factory; it is situated within the fort in a very confined site. Some time ago (in 1839) an upper story was added for the accommodation of the court, and the ground floor is now used exclusively as the jail. There is a small court on the north-west side, with a row of what must have originally been godowns, but which have been converted into two cells, one for female prisoners, the other is used as the hospital. The dimensions of the cells in the body of the building and under the court house are as follows, one 56 feet by 33, with four windows, two 22 feet by 16, each with one window, and one 32 feet by 22, with two windows. The

ventilation in all these apartments is insufficient. The dimensions of the female cell and hospital are 20 feet by 16, and 18 feet by 16 respectively, and the ventilation is equally faulty as in the jail.

The diet clothing, hours of labour and nature of work are given in the general statement annexed to the report of this division.

Tables No. 20 and 21, shew the nature and amount of disease and mortality which have occurred amongst the inmates from (1833, the period when first occupied) to 1841 inclusive; by which it will be seen that the mortality has been less than in any of the other jails in this division. Amongst the convicts, from an aggregate strength of 1143, the admissions amount to 1109, with only 44 deaths; or 27·025 and 3·486, respectively, per cent to the strength; while amongst those waiting for trial only 207 admissions with 21 deaths have occurred from an aggregate strength of 433, the per centage of admissions to strength being 47·916, and of deaths 4·861.

JAIL OF VIZAGAPATAM.

No. 20.—*Table exhibiting the number of Admissions and Deaths amongst the convicted Prisoners, for a period of nine years, from* 1833 *to* 1841 *inclusive.*

CLASSES.	DISEASES.	Aggregate strength 1143. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	66	2	72	1	102	5	178	2	280	7	24 ·496	2 ·500
	„ int. quot..	34	1	105	0								
	„ remittens..	1	1	1	1								
	„ com. cont.	1	1	0	0								
	Cholera	1	0	9	3	1	0	9	3	10	3	0 ·874	30 ·000
Diseases of the Abdominal viscera.......	Diarrhœa	15	3	28	3	37	6	66	9	103	15	9 .011	14 ·563
	Dysenteria.....	18	2	30	6								
	Dyspepsia......	4	1	8	0								
Diseases of the Lungs	Catarrhus......	2	0	3	1	7	2	7	1	14	3	1 ·224	21 ·428
	Asthma........	4	2	4	0								
	Pneumonia.....	1	0	0	0								
Do. of the Brain.....	Epilepsia.... ..	0	0	1	0	1	0	2	0	3	0	0 ·262	0 ·000
	Paralysis.......	1	0	1	0								
Eruptive fevers......	Variola.........	0	1	11	1	42	1	12	1	54	2	4 ·724	3 ·703
	Varicella.......	42	0	1	0								
	Anasarca.......	1	2	4	1	1	2	4	1	5	3	0 ·437	60 ·000
	Rheumatismus..	34	1	30	1	34	1	30	1	64	2	5 ·599	3 ·125
Venereal affections..	Syphilis prim..	4	0	4	0	6	0	10	0	16	0	1 ·399	0 ·000
	„ Consecutiva	1	0	1	0								
	Gonorrhœa.. ..	0	0	2	0								
	Hernia humor..	1	0	2	0								
	Strictura urethrae.........	0	0	1	0								
Specific diseases.....	Atrophia.......	4	1	1	1	8	2	7	4	15	6	1 ·312	40 ·000
	Scrophula......	1	0	1	0								
	Beriberi........	3	1	5	3								
Diseases of the eye...	Morbi oculorum	6	0	11	0	6	0	11	0	17	0	1 ·487	0 ·000
Do. „ Skin	„ cutis....	45	1	47	0	45	1	47	0	92	1	8 ·048	1 ·086
	Other diseases..	205	1	231	1	205	1	231	1	*436	2	38 ·145	0 ·458
	Total..	495	21	614	23	495	21	614	23	1109	44	97 ·025	3 ·967

* Of this number were Phlogosis.... 100
„ „ Ulcus....... ... 67
„ „ Punitio. 150

Total.. 317

Per centage of deaths to strength.. 3·596

JAIL OF VIZAGAPATAM.

No. 21.—*Table exhibiting the number of Admissions and Deaths amongst the Prisoners, under trial, for nine years, from* 1833 *to* 1841 *inclusive.*

CLASSES.	DISEASES.	Aggregate strength 432. 1st Half. Ad.	Aggregate strength 432. 1st Half. Dd.	Aggregate strength 432. 2d Half. Ad.	Aggregate strength 432. 2d Half. Dd.	Admissions and Deaths from each class of Diseases. 1st Half. Ad.	Admissions and Deaths from each class of Diseases. 1st Half. Dd.	Admissions and Deaths from each class of Diseases. 2d Half. Ad.	Admissions and Deaths from each class of Diseases. 2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	12	1	14	0	16	2	17	0	33	2	7 ·638	6 ·060
	,, intermit quot.	3	0	0	0								
	,, remittens.....	0	0	3	0								
	,, com. cont.....	1	1	0	0								
	Cholera....	3	2	0	0	3	2	0	0	3	2	0 ·694	66 ·666
Diseases of the abdominal viscera......	Diarrhœa.......	7	0	2	1	13	1	7	3	20	4	4 ·629	20 ·000
	Dysenteria......	4	1	5	2								
	Hœmorrhois....	1	0	0	0								
	Dyspepsia......	1	0	0	0								
Diseases of the Lungs	Asthma........	0	0	1	0	0	0	2	1	2	1	0 ·462	50 ·000
	Phthisis pulmonallis.........	0	0	1	1								
Diseases of the Brain.	Paralysis........	0	0	1	1	2	0	4	1	6	1	1 ·388	16 ·666
	Amentia........	2	0	3	0								
Eruptive fever.......	Variola.........	1	1	3	1	19	1	6	1	25	2	5 ·787	8 ·000
	Varicella.......	18	0	3	0								
	Anasarca.......	0	0	1	1	0	0	1	1	1	1	0 ·231	100 ·000
	Rheumatismus..	3	0	5	0	3	0	5	0	8	0	1 ·851	0 ·000
	Syphillis primitiva..........	2	0	1	0	2	0	1	0	3	0	0 ·694	0 ·000
Specific diseases.....	Atrophia........	8	1	3	2	9	1	9	6	18	7	4 ·166	38 ·888
	Beriberi........	1	0	6	4								
Diseases of the Skin..	Morbi cutis....	26	0	18	0	26	0	18	0	44	0	10 ·185	0 ·000
	Other diseases..	25	0	19	1	25	0	19	1	*44	1	10 ·185	2 ·272
	Total..	118	7	89	14	118	7	89	14	207	21	47 ·916	10 ·144

* Of this number were Phlogosis 3.
,, ,, Ulcus....17 and 1 death.

Per centage of deaths to strength 4·861.

No. 22.—*Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Vizagapatam, from* 1829 *to* 1841 ; *exclusive of the* 1st *half yearly period of* 1831, 1832, *and* 1841, *and the* 2d *half year of* 1831.

CLASSES.	DISEASES.	Aggregate strength 7320. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers.	Febrisephemera	101	0	356	2								
	,, intermit quot.	218	6	614	6								
	,, tertiana.......	12	0	46	0	357	7	1065	9	1422	16	19 ·426	1 ·125
	,, remittens.. ...	5	1	3	0								
	,, com. cont....	21	0	46	1								
	Cholera........	19	12	22	10	19	12	22	10	41	22	0 ·560	53 ·658
Diseases of the Abdominal viscera......	Diarrhœa......	19	0	33	0								
	Dysenteria......	25	4	50	5								
	Obstipatio......	8	1	11	0	69	5	134	5	203	10	2 ·773	4 ·926
	Dyspepsia......	17	0	37	0								
	Splenitis........	0	0	3	0								
	Hepatitis.......	7	1	3	1	7	1	3	1	10	2	0 ·136	20 ·000
Diseases of the Lungs	Catarrhus......	28	0	19	1								
	Asthma........	9	0	19	2								
	Phthisis pulmonalis.........	1	0	1	1	48	2	70	5	118	7	1 ·612	5 ·932
	Pneumonia.....	3	1	6	1								
	Dyspnœa.......	7	1	25	0								
Diseases of the Brain.	Apoplexia......	1	1	5	2								
	Epilepsia.......	2	0	1	0								
	Paralysis.......	3	2	7	0								
	Amentia........	1	0	0	0	10	5	26	4	36	9	0 ·491	25 ·000
	Mania...........	2	1	10	0								
	Tetanus........	1	1	2	1								
	Hydrophobia....	0	0	1	1								
Eruptive fevers......	Variola.........	4	0	4	0								
	Varicella.......	30	0	7	0	35	0	12	0	47	0	0 ·642	0 ·000
	Rubeola........	1	0	1	0								
Dropsies...	Anasarca.......	7	2	4	4	10	4	6	6	16	10	0 ·218	62 ·500
	Ascites.........	3	2	2	2								
	Rheumatismus..	179	2	277	2	179	2	277	2	456	4	6 ·229	0 ·877
Venereal affections...	Syphilis primitiva..........	83	0	109	1								
	,, consecutiva..	9	0	5	1								
	Gonorrhœa.....	30	0	34	0	148	0	177	2	325	2	4 ·439	0 ·615
	Hernia humoralis..........	21	0	25	0								
	Strictura urethræ.........	5	0	4	0								
Specific diseases.....	Dracunculus....	3	0	1	0								
	Atrophia.	17	0	8	2								
	Scorbutus......	0	0	2	0	30	1	28	7	58	8	0 ·792	13 ·793
	Scrophula......	4	0	1	0								
	Beriberi........	5	1	16	5								
	Lepra..........	1	0	0	0								
Diseases of the eye...	Morbi oculorum	19	0	74	0	19	0	74	0	93	0	1 ·270	0 ·000
Do, ,, Skin.	,, Cutis......	176	0	191	0	176	0	191	0	367	0	5 ·013	0 ·000
	Other diseases..	329	1	570	6	329	1	570	6	*899	7	12 ·281	0 ·778
	Total..	1436	40	2655	57	1436	40	2655	57	4091	97	55 ·887	2 ·371

* Of this number were Phlogosis 240 and 1 death.
,, ,, Ulcus...317
Per centage of deaths to strength 1·325.

No. 23.—*Table exhibiting the number of admissions and deaths amongst the Veteran in the Carnatic European Veteran Battalion from* 1829 *to* 1841 *inclusive.—Stationed at Vizagapatam.*

CLASSES.	DISEASES.	Aggregate strength 2937.j				Admissions and Deaths from each class of Disease.				Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
		1st Half.		2d Half.		1st Half.		2d Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers......	Febrisephemera	20	0	26	1	81	4	75	3	154	7	5 ·243	4 ·545
	„ intermittens..	39	1	38	0								
	„ remittens.....	12	2	4	1								
	continua........	10	1	5	1								
	Cholera	10	7	13	8	10	7	13	8	23	15	0 ·783	65 ·217
Diseases of the abdominal viscera......	Diarrhœa.......	29	4	26	0	419	38	426	30	845	68	28 ·770	8 ·023
	Dysenteria acuta et chronica.	130	23	90	21								
	Obstipatio......	2	0	8	0								
	Dyspepsia......	211	9	267	7								
	Hœmorrhois....	44	2	31	2								
	Spleuitis........	3	0	4	0								
	Hepatitis.......	49	2	66	4	49	2	66	4	115	6	3 ·915	5 ·217
Diseases of the Lungs & Heart..	Catarrhus......	11	2	9	0	45	9	71	8	1:6	17	3 ·949	14 ·655
	Asthma.........	13	2	44	5								
	Phthisis pulmonalis..........	4	4	2	2								
	Pneumonia.....	10	1	8	1								
	Dyspnœa.......	7	0	8	0								
Diseases of the Brain.	Apoplexia......	10	4	17	13	225	21	184	25	409	46	13 ·925	11 ·245
	Epilepsia.......	6	0	5	0								
	Paralysis........	37	3	47	9								
	Delirium trem..	18	5	20	1								
	Ebrietas........	152	9	92	1								
	Amentia,.......	0	0	0	0								
	Mania..........	2	0	2	0								
	Hydrophobia...	0	0	1	1								
Eruptive fevers......	Variola.........	1	0	1	0	1	0	3	0	4	0	0 ·136	0 ·000
	Erysipelas......	0	0	2	0								
Dropsies...	Anasarca.......	11	2	11	2	15	2	24	7	39	9	1 ·327	23 ·076
	Ascites.........	4	0	13	5								
	Rheumat.acutus et chronicus..	120	2	119	3	120	2	119	3	239	5	8 ·137	2 ·092
Venereal affections..	Syphilis primitiva...........	17	1	13	1	89	1	66	1	155	2	5 ·277	1 ·290
	„ consecutiva..	.2	0	3	0								
	Gonorrhœa.....	57	0	36	0								
	Hernia humoralis............	8	0	7	0								
	Strictura urethræ.........	5	0	7	0								
Specific diseases.....	Dracunculus....	1	0	0	0	23	6	46	10	69	16	2 ·349	23 ·188
	Atrophia........	8	1	14	3								
	Scorbutus......	2	0	1	0								
	Beriberi........	12	5	30	7								
	Lepra..........	0	0	1	0								
Diseases of the eye...	Morbi oculorum	8	0	8	0	8	0	8	0	16	0	0 ·544	0 ·000
Do, „ Skin.	„ Cutis......	11	0	22	0	11	0	23	0	33	0	1 ·123	0 ·000
	Other diseases..	287	4	224	2	287	4	224	2	511	6	17 ·398	1 ·174
	Total..	1383	96	1316	101	1383	96	1315	101	2728	197	92 ·883	7 ·221

Per centage of deaths to strength 6·707.

CANTONMENT OF VIZIANAGRUM.

Description of the cantonment. Vizianagrum is situated in north latitude 18° 2″, and east longitude 83° 32″; being 12 miles distant from the sea. The garrison at present consists of one regiment of native infantry, and a detachment of foot artillery.

At the distance of one mile from the cantonment, which is placed on ground sloping gently to the northward, are the fort and village of Vizianagrum, and lying between them a large tank which contains water at all seasons of the year. The inhabitants of the village are chiefly weavers and cultivators of land; and the fort is entirely occupied by the palace, and buildings of the Rajah. The station contains about 26 officers' houses, the most of which are tiled; but some are roofed with the cadjan leaf, and are in a tolerable state of repair. Roads. The roads in the vicinity are excellent, being kept up by private funds.

Soil. The surrounding country is almost entirely under cultivation, and the soil is a deep, and very productive alluvium. The crops raised are chiefly rice and cooltie, but most of the other ordinary productions of the country, are also to be had.

Climate. The climate is generally salubrious, though some seasons of the year, are less so than others. At the distance of six miles in a northerly direction rise numerous ranges of hills, connected with the eastern ghauts, and in the vicinity of these, fever is always very prevalent. They were formerly covered with trees, but are now bare, there being only a few detached patches of stunted underwood to be seen.

The climate from September till March, enjoys a high reputation for salubrity, so much so, as to tempt the European residents from Waltair and Vizagapatam, to remove hither during these months. The enervating effects of the humid atmosphere of the coast, being visible in the pallid looks of

persons on first arrival from thence. A short residence however at Vizianagrum produces a marked change, particularly observable in the rapidly improved appearance which takes place in children. In the month of April the weather becomes warm, and towards the middle of the month, the hot land winds commence; the thermometer sometimes standing at 100° during the whole 24 hours, and at night seldom falling below 96°, when it is both oppressive and exhausting. Towards the end of the month of May rain falls, which cools the air, and early in June, after considerable atmospheric changes, the monsoon sets in, when it becomes cool, although the nights are occasionally warm. A good deal of rain falls in September and October, and towards the end of the latter month, cold northerly winds commence. The weather during the remainder of the year, is cold and to some persons disagreeably so.

Barracks and hospital.

The barracks or places of arms, are immediately in front of the parade ground, facing to the south, and running east and west. The officers quarters are situated on the west side of the barrack, and immediately behind them, on the north, are the sepoys lines. On the east, and in a line with the barracks, is the hospital, a large and well constructed building, surrounded by a verandah 10 feet broad, capable of containing 60 patients; it consists of two wards, which are placed at right angles to one another, the larger is 78 feet in length, and 18 in breadth, and is calculated for 40 patients, the smaller is 36 feet in length, and 18 in breadth, and is adapted for 20 patients; at the corners, there are four verandah rooms, which are used as the surgery, store rooms and baths. The hospital is raised six feet above the ground, and is entered by a flight of seven steps, at three different places. It is built of brick and chunam and tiled, and is in perfect repair. From the numerous doors and windows, and the elevated position of the hospital, the ventilation is perfect. A wall seven feet high, at the distance of 48 yards surrounds it, and in the east and west corners of the enclosure, are the cook room and necessary.

No. 24.—*Table exhibiting the number of Admissions and Deaths amongst the Native Troops stationed at Vizianagrum, from* 1829 *to* 1840, *exclusive of* 1830 *and* 1831.

CLASSES.	DISEASES.	Aggregate strength 13053. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	366	1	822	0	2149	40	3434	33	5583	73	42 ·771	1 ·307
	„ int. quot..	1661	29	2360	17								
	„ tertian.....	21	0	90	1								
	„ remittens..	89	7	129	10								
	„ com. cont.	9	8	33	5								
	Cholera........	72	29	72	29	72	29	72	29	144	58	1 ·103	40 ·277
Diseases of the Abdominal viscera.......	Diarrhœa......	54	4	64	0	277	15	440	12	717	27	5 .492	3 ·765
	Dysenteria acuta et chronica.	89	8	141	10								
	Obstipatio......	18	0	82	0								
	Dyspepsia......	103	3	195	1								
	Hœmorrhois....	8	0	6	1								
	Splenitis........	5	0	2	0								
	Hepatitis.......	5	1	13	3	5	1	18	3	18	4	0 ·137	22 ·222
Diseases of the Lungs	Catarrhus......	16	1	36	1	57	9	111	7	168	16	1 ·287	9 ·523
	Asthma........	29	2	55	2								
	Phthisis pulmonalis..........	3	3	6	3								
	Pneumonia.....	6	3	2	0								
	Dyspnœa.......	3	0	12	1								
Do. of the Brain.....	Apoplexia......	0	0	4	3	15	3	24	5	39	8	0 ·298	20 ·512
	Epilepsia.......	4	0	2	0								
	Paralysis.......	4	1	6	1								
	Amentia........	0	0	3	0								
	Mania..........	6	1	8	0								
	Tetanus........	1	1	1	1								
Eruptive fevers......	Variola.........	12	0	2	0	117	0	27	0	144	0	1 ·103	0 ·000
	Varicella.......	95	0	15	0								
	Erysipelas......	6	0	8	0								
	Rubeola........	4	0	2	0								
Oropcies....	Anasarca.......	9	0	5	0	13	2	7	2	20	4	0 ·152	20 ·000
	Ascites.........	4	2	2	2								
	Rheumat. acutus et chronicus.	453	2	591	13	453	2	594	13	1047	15	8 ·021	1 ·432
Venereal affections..	Syphilis prim..	111	1	140	3	186	1	246	4	432	5	3 ·309	1 ·157
	„ Consecutiva	0	0	4	0								
	Gonorrhœa.....	39	0	66	0								
	Hernia humor..	29	0	33	0								
	Strictura urethrae.........	7	0	3	1								
Specific diseases.....	Dracunculus....	6	0	2	0	144	20	325	40	469	60	3 ·593	12 ·797
	Atrophia........	14	2	21	8								
	Beriberi........	120	18	298	32								
	Lepra..........	1	0	1	0								
	Scrophula......	3	0	3	0								
Diseases of the eye...	Morbi oculorum	58	0	103	1	58	0	103	1	161	1	1 ·233	0 ·602
Do. „ Skin	„ cutis....	416	0	342	1	416	0	342	1	758	1	5 ·807	0 ·131
	Other diseases.	946	3	1075	6	946	3	1075	6	*2021	9	15 ·483	0 ·445
	Total..	4908	125	6813	156	4908	125	6813	156	11721	2[illegible]1	89 ·7 5	2 ·397

* Of this number were Phlogosis.... 891 and 2 deaths.
„ „ Ulcus...... 331 „ 3 „
Per centage of deaths to strength.. 2·152.

GANJAM DISTRICT.

General description of the district.

This extensive district, which is the most northern part of the Madras territories, stretches along the sea coast, in a north-easterly direction, from the Vizagapatam collectorate, to the Chilka lake; a part of the Goomsoor Rajah's country intervening between it and the Mahanuddy river, which separates the Madras presidency from the province of Cuttack, in Bengal. It lies between 18°15″, and 20° 15″ of north latitude, and is of very irregular breadth, varying from 10 to 15 miles in some parts, where the ghauts approach near to the coast, to from 40 to 60 miles, in other situations, where they recede more inland.

The general appearance of the country is not very dissimilar to that of the northern portion of the Vizagapatam district already described, the ghauts however approach nearer to the sea than in that district, although throughout the entire line of coast, an extensive, fertile, alluvial plain free from hills of any considerable height, extends from it to the ghauts.

Population and Extent.

The country lying between the coast and the ghauts, is estimated to contain 6,400 square miles, with a population of 4,38,174 souls. It is extremely fertile, and produces larger quantities of rice, and other grains, and also sugar cane and cotton; besides which a variety of articles of hill produce are to be met with, such as gums, wax, arrow root and native dyes, which are exported in considerable quantities—Ganjam has long been known for its sugar of an excellent quality; Berhampore silks were formerly prized; and Chicacole is still justly celebrated for its fine muslins.

Rivers and Water.

There are no rivers of any importance in the district, though various small streams, chiefly

of the character of mountain torrents, which become completely dried up in the hot season, flow from the hills to the sea : the Ganjam and Chicacole rivers being the largest of these ; tanks and wells are every where to be met with, and water is generally of good quality, and well adapted both for cultivation, and for domestic purposes.

Lake. The Chilka lake may be considered as an extensive back water 35 miles in length, by about 8 in breadth, on the north-west side of which, the chain of the eastern ghauts abruptly terminates ; and on its western side the lake is separated from the sea by a long neck of sand, of nearly a mile in breadth.

The entrance through this bank from the sea, at the village of Manickpatam on the northern side, is about three quarters of a mile wide, the ferry is however unsafe at particular seasons, especially during the north-east monsoon, when travellers usually prefer the circuitous route along the western borders of the lake.

This extensive sheet of water is diversified by several beautifully wooded islands, which abound with game ; and before Ganjam became so unhealthy as to occasion its being wholly deserted, was the frequent resort of European visitors from other stations, during the hot months, some excellent houses having been erected on its margin.

Roads. The great northern road from Madras to Calcutta, runs through the entire length of the district, parallel to the coast, and is in general within a short distance of it.

Chief Stations in the district. The civil and military stations are, Chicacole, Berhampore, Russel-condah, Aska, Kimmedy and Itchapore; Ganjam from which it derives its name, having been completely deserted since the year 1815, when a malignant epidemic fever broke out, which carried off a large porportion of its inhabitants, both Europeans and natives, and in consequence of which, the courts and other civil establishments, were removed from thence to Chicacole.

CHICACOLE.

Description of the station.

Chicacole lies about four miles from the sea in a direct line, on the north bank of the Nagglawdy river, which divides the village into two nearly equal parts, being distant 44 miles north-east of Vizianagrum, and 115 south-west of Berhampore. On the north, east and west, it is surrounded by large tracts of rice cultivation, and extensive plains of cotton ground, which are partially watered by channels from the river.

The face of the country on the opposite bank of the river, is of a dry ferruginous nature, and not so well adapted for cultivation as that on the cantonment side; and there are no hills of any magnitude nearer than from 12 or 15 miles.

Native town.

Chicacole, which lies south of the old fort, is built in a straggling manner, and like native towns in general, the streets are narrow, confined and dirty, and from the flatness of the ground, and surrounding country, they are frequently almost impassable after heavy rain, in consequence of which, the houses are all raised from two to four feet, in order to secure dry flooring; the houses are usually built of mud, and thatched, but many also are tiled, and some few have terraced roofs. Wells are numerous, but the water in all is brackish, except in one from which the European inhabitants derive their supply; the sepoys and inhabitants of the town use the river water, which is considered good for culinary purposes.

The Chicacole river or Nagglawdy.

The river has its source in the hills, near Polcondah, and in its bed are numerous rocks, of granitic formation; when full from bank to bank, it is about a quarter of a mile in breadth in some parts, and as much as half a mile in others; the stream is very rapid during the rains, and the natives float down timber, and bamboos by it for building purposes. Both its bed and banks are

chiefly composed of sand, in which there are numerous

Tanks. quick sands. There are but very few tanks in the immediate vicinity of the town, but several of considerable magnitude are to be found within five or six miles, many of which are covered with rank vegetation, and in the dry season, when they are almost dried up, are productive sources of malaria.

The periods of the year when exhalations are most abundant, is after the termination of the monsoon, at which time fevers and agues prevail. The climate of Chicacole is salubrious; the number of the inhabitants is computed at fifty thousand, the average number of inmates in each house, varying from five to fifteen.

During the cold months of the year, fogs are common both

Climate. in the mornings and evening. The prevailing winds from April to September, are from the south and south-east, and from October to March, from the north and north-east; the latter is cold, and that from the south-east, coming from the sea and along the bed of the river, brings with it much fine sand which accumulates in large mounds about the town; to such an extent in some situations, that an old Mahomedan mosque has become nearly covered with it.

Manufacture&c. Coarse cloths and muslins are the only articles of manufacture, the latter of a very superior texture and richly worked, are to be met with in all the markets throughout the country.

The vegetables commonly in use are in great abundance; and the bazaar is well furnished with native medicines. The hakeems are considered skilful, though very little acquainted with European medicine; and there is a class of persons, who bring down from the hills, honey, bees wax, and dammer.

Roads. The roads are of the worst description, with the exception of one, which has lately been laid down with ferruginous earth; those in the neighbourhood, are generally

sandy, and no labour is expended on them for repairs. The jail prisoners have been occasionally employed digging drains in the town.

Many of the better class of natives sleep on cots, with coir bedding or mats, but the poor lie on the ground, either on mats or cumblies; and their clothing is scanty and indifferent.

The fuel chiefly used is cow dung formed into cakes, and dried in the sun, for firewood though plentiful, is beyond the means of the poor.

The necessaries of life in favourable seasons are in great abundance, and cheap—the average price of the ordinary rice, being about one rupee for forty seers. Raggee is very cheap, and also much used, being eaten like porridge.

Employments. Many of the inhabitants are employed in weaving cotton cloth and muslin, the work being carried on in the open air; and the remainder are cultivators.

There are several native schools in the town, and one supported by voluntary contributions, in which the English language is taught.

There has heretofore been no poor house, or place of reception for vagrants or destitute persons, but a society has lately been formed for their relief.

Breed of Cattle. The breed of cattle is diminutive, and the pasturage, throughout a considerable part of the year, exceedingly scanty; at the commencement of the monsoon, numbers die of purging, produced by the sudden change from dry to green food.

Public buildings. The barracks, hospital, magazine, stores, and also the residence of the commanding officer, the adjutant and the medical officer, are all situated within the walls of an old mud fort, which is in a ruinous condition. The ditch though partly filled up, can still be traced, and in many places con-

tains pools of stagnant water. The buildings enumerated, surround an open space, called the parade ground; the regimental lines being without the fort, at the distance of about 100 yards, in the south-west direction; they are open, airy and regularly built.

The hospital which is intended both for the sick of a native regiment, and the garrison details, stands on elevated dry ground. It is sufficiently large and roomy to admit of a double row of cots, has a good surgery,—a separate apartment for the sick of the garrison, and a small guard room in front.—At the back of the building is a wall belonging to some adjoining premises running parallel with it, by which the free circulation of air in that direction, is somewhat prevented.

Jail. The jail is situated near the river, about half a mile from the cantonment; it is a substantial building, but the walls are rather low, not being more than nine feet high; it is divided into several courts, for the various classes of prisoners, and altogether consists of ten cells; their average dimensions being 54 feet by 18, and 8 feet high, with six windows and two doors to each; the whole is considered to be well ventilated, and there is an ample supply of good water on the premises. The hospital is 50 feet by 15 and ten feet in height, and is also well ventilated. See the statement at the end of the report for diet, clothing, labour &c.

This jail was closed in December 1839, and the prisoners removed to Vizagapatam; but it is deemed proper to give here the usual tables of disease for the ten years from 1829 to 1838 inclusive. In table No. 27 are exhibited the annual admissions and deaths, from six of the principal diseases, viz. *fever, cholera, diarrhœa, dysentery, anasarca and beriberi*; the per centage is also given for the purpose of contrasting the state of the health of the prisoners in this jail, with that of the others in the division. It will be observed that the number of deaths from these six diseases amounts to 175, or 7-8ths of the whole mortality, the total deaths being 201.

JAIL OF CHICACOLE.

No. 25.—*Table exhibiting the number of Admissions and Deaths of the convicted Prisoners, from each class of disease for* 10 *years.*

CLASSES.	DISEASES.	1829 to 1838. Aggregate strength 1673. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	0	0	0	0								
	,, intermit quot.	163	1	230	2								
	,, tertiana......	2	0	1	0	178	6	241	3	419	9	25 ·014	2 ·147
	,, remittens.....	13	5	9	1								
	,, continua... ..	0	0	1	0								
	Cholera....	19	12	16	11	19	12	16	11	35	23	2 ·092	65 ·714
Diseases of the abdominal viscera......	Diarrhœa.......	35	3	38	4								
	Dysenteriaacuta et chronica...	20	5	35	9	55	8	73	13	128	21	7 ·650	16 ·406
	Obstipatio......	0	0	0	0								
	Hepatitis acuta.	0	0	1	0	0	0	1	0	1	0	0 ·059	0 ·000
Diseases of the Lungs	Catarrhus......	2	0	0	0								
	Asthma........	2	0	2	0	6	0	2	0	8	0	0 ·478	0 ·000
	Pneumonia.....	2	0	0	0								
Diseases of the Brain.	Epilepsia........	2	0	1	0								
	Paralysis........	1	0	0	0	9	0	7	0	16	0	0 ·956	0 ·000
	Amentia........	6	0	6	0								
	Mania..........	0	0	0	0								
Eruptive fevers......	Variola.........	14	3	1	1								
	Varicella.......	23	0	1	0	37	3	3	1	40	4	2 ·390	10 ·000
	Eryipelas.......	0	0	1	0								
	Rheumat.acutus et chronicus..	82	1	70	0	82	1	70	0	152	1	9 ·085	0 ·657
	Syphillis primitiva..........	4	0	5	0	4	0	5	0	9	0	0 ·537	0 ·000
Specific diseases.....	Atrophia........	1	0	4	4								
	Beriberi........	57	12	58	16								
	Lepra..........	3	1	2	0	64	14	66	21	130	35	7 ·770	26 ·923
	Dracunculus....	0	0	0	0								
	Scrophula	3	1	2	1								
Diseases of the eye...	Morbi oculorum	4	1	6	1	4	1	6	1	10	2	0 ·597	20 ·000
Do ,, Sikn	,, cutis....	41	0	38	0	41	0	38	0	79	0	4 ·722	0 ·000
	Other diseases..	206	1	188	0	206	1	188	0	394	1	23 ·550	0 ·253
	Total..	705	46	716	50	705	46	716	50	1421	96	84 ·937	6 ·755

JAIL OF CHICACOLE.

No. 26.—*Table exhibiting the number of Admissions and Deaths of the Prisoners under trial from each class of disease for* 10 *years.*

CLASSES.	DISEASES.	1829 to 1839. Aggregate strength 1006. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers.	Febris ephemera	0	0	1	0								
	,, intermit quot.	11	1	12	1								
	,, tertiana.......	0	0	0	0	13	3	13	1	26	4	2 ·584	15 ·384
	,, remittens.. ...	2	2	0	0								
	,, continua......	0	0	0	0								
	Cholera	23	16	14	10	23	16	14	10	37	26	3 ·677	70 ·270
Diseases of the Abdominal viscera......	Diarrhœa	3	1	8	3								
	Dysenteria acuta et chronica	8	3	11	8	11	4	19	11	30	15	2 ·982	50 ·000
	Obstipatio......	0	0	0	0								
	Catarrhus......	1	1	1	0	1	1	1	0	2	1	0 ·198	50 ·000
	Amentia........	0	0	2	0	0	0	2	0	2	0	0 ·198	0 ·000
Eruptive fevers......	Variola.........	1	0	0	0	4	0	0	0	4	0	0 ·397	0 ·000
	Varicella.......	3	0	0	0								
	Rheumat. acutus et chronicus..	1	0	8	1	1	0	8	1	9	1	0 ·894	11 ·111
Venereal affections...	Syphilis primitiva..........	0	0	1	0	0	0	1	0	1	0	0 ·099	0 ·000
Specific diseases.....	Atrophia.	1	1	1	1	35	17	83	34	118	51	11 ·729	43 ·220
	Beriberi........	34	16	82	33								
Diseases of the eye...	Morbi oculorum	2	0	2	0	2	0	2	0	4	0	0 ·397	0 ·000
Do, ,, Skin.	,, Cutis......	3	0	30	1	3	0	30	1	33	1	3 ·280	3 ·030
	Other diseases..	41	5	33	1	41	5	33	1	74	6	7 ·355	8 ·108
	Total..	134	46	206	59	134	46	206	59	340	105	33 ·797	30 ·882

Table No. 27 Jail of Chicacole.	1829.		1830.		1831.		1832.		1833.		1834.		1835.		1836.		1837.		1838.		Total.	
	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.
Convicts. Fever	5	2	34	0	18	0	57	1	42	0	45	2	101	0	49	1	48	2	20	1	419	9
Cholera	0	0	0	0	7	5	4	2	4	4	17	12	0	0	0	0	2	0	1	0	35	23
Diarrhœa	0	0	9	1	7	2	9	0	8	0	6	0	14	1	10	1	5	1	5	1	73	7
Dysentery	1	0	9	3	10	1	5	1	7	0	10	6	6	1	2	1	2	1	3	0	55	14
Anasarca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	7	2	5	0	13	5	6	1	1	0	28	9	22	2	15	3	10	5	8	1	115	28
Admissions and deaths from these diseases.	13	4	57	4	55	13	81	5	62	4	106	29	143	4	76	6	67	9	37	3	697	81
Total admissions and deaths	21	6	119	4	102	14	165	7	109	6	155	31	266	7	152	7	175	10	157	4	1421	96
Strength each year	130		195		208		159		81		147		250		221		160		122		1673	
Under Trial. Fever	0	0	0	0	0	0	2	0	7	0	4	1	5	0	4	1	4	2	0	0	26	4
Cholera	0	0	0	0	0	0	1	0	13	10	16	11	0	0	0	0	6	4	1	1	37	26
Diarrhœa	0	0	0	0	0	0	1	0	2	0	2	2	3	0	1	1	2	1	0	0	11	4
Dysentery	2	1	3	2	1	1	1	0	4	1	5	5	1	0	2	1	0	0	0	0	19	11
Anasarca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beriberi	2	1	10	5	21	11	1	0	5	2	59	18	6	7	4	3	4	1	4	1	116	49
Admissions and deaths from these diseases.	4	2	13	7	22	12	6	0	31	13	86	37	15	7	11	6	16	8	5	2	209	94
Total admissions and deaths	6	3	18	7	61	15	22	1	35	14	91	41	21	7	14	6	22	9	47	2	340	105
Strength each year	73		88		150		71		164		224		71		65		55		45		1006	
Admissions and deaths amongst both classes of prisoners	27	9	137	11	163	29	187	8	144	20	219	72	287	14	166	13	197	19	204	6	1761	201
Total strength each year	203		283		358		230		245		371		321		286		215		167		2679	
Per centage of deaths to strength	4	·433	3	·886	8	·100	3	·478	8	·163	19	·407	4	·361	4	·545	8	·837	3	·592	7	·502
Per centage of sick to strength	13	·300	48	·409	45	·530	81	·304	58	·775	67	·115	89	·408	58	·041	91	·627	122	·155	65	·733
Per centage of deaths to sick treated	33	·333	8	·029	17	·791	4	·278	13	·888	28	·915	4	·878	7	·831	9	·614	2	941	11	413

o. 28.—*Table exhibiting the number of Admissions and Deaths mongst the Native Troops at Chicacole, from* 1830 *to* 1841 *; exclu-we of the years* 1832 *and* 1834, *and the* 2d *half of* 1833 *and* 1840.

CLASSES.	DISEASES.	Aggregate strength 6070. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	302	1	493	6	1597	18	959	14	2556	32	42 ·108	1 ·251
	,, int. quot..	1198	16	426	3								
	,, tertian.....	33	0	22	0								
	,, remittens..	53	0	11	8								
	,, com. cont.	11	1	7	2								
	Cholera........	24	10	32	21	24	10	32	21	56	31	0 ·922	55 ·357
Diseases of the Abdominal viscera.......	Diarrhœa	52	0	59	1	147	3	257	8	404	11	6 .655	2 ·732
	Dysenteria.. ...	39	3	42	6								
	Obstipatio......	19	0	27	0								
	Dyspepsia......	33	0	126	1								
	Hœmorrhois....	4	0	3	0								
	Hepatitis.......	3	0	5	0	3	0	5	0	8	0	0 ·131	0 ·000
Diseases of the Lungs	Catarrhus......	15	0	6	0	29	2	19	2	48	4	0 ·790	8 ·333
	Asthma........	9	2	10	2								
	Phthisis pulmonalis.........	2	0	0	0								
	Pneumonia.....	3	0	3	0								
Do. of the Brain.	Apoplexia......	1	1	0	0	30	1	5	2	35	3	0 ·576	8 ·571
	Epilepsia.......	1	0	4	1								
	Paralysis.......	23	0	0	0								
	Mania..........	5	0	0	0								
	Tetanus........	0	0	1	1								
Eruptive fevers......	Variola.........	11	3	1	0	50	3	3	0	53	3	0 ·873	5 ·660
	Varicella.......	39	0	1	0								
	Erysipelas......	0	0	1	0								
Dropsies....	Anasarca.......	6	3	5	1	7	4	6	2	13	6	0 ·214	46 ·153
	Ascites.........	1	1	1	1								
	Rheumatismus,	256	1	240	7	256	1	240	7	496	8	8 ·171	1 ·612
Venereal affections ..	Syphilis prim..	46	0	43	1	64	0	66	2	130	2	2 ·141	1 ·538
	,, Consecutiva	0	0	1	0								
	Gonorrhœa.... ..	4	0	6	1								
	Hernia humor..	9	0	14	0								
	Strictura urethrae.........	5	0	2	0								
Specific diseases.....	Dracunculus....	1	0	0	0	88	9	198	14	286	23	4 ·711	8 ·041
	Atrophia.......	15	3	20	3								
	Scorbutus......	1	0	0	0								
	Scrophula......	3	0	2	1								
	Beriberi..	67	6	176	10								
	Lepra..........	1	0	0	0								
Diseases of the eye...	Morbi oculorum	28	0	24	0	28	0	24	0	52	0	0 ·856	0 ·000
Do. ,, Skin	,, cutis....	198	0	159	0	198	0	159	0	357	0	5 ·881	0 ·000
	Other diseases.	531	3	458	5	531	3	458	5	*989	8	16 ·293	0 ·808
	Total..	3052	54	2431	77	3052	54	2431	77	5483	131	90 ·329	2 ·389

* Of this number were Phlogosis 489 and 1 death.
,, ,, Ulcus...110
Per centage of deaths to strength 2·156.

BERHAMPORE.

General description. The station of Berhampore lies 150 miles north of Chicacole, and has been occupied by a native regiment for about 29 years past, having been selected in consequence of the malignant epidemic fever, which broke out about that time, at the neighbouring station of Ganjam, 17 miles to the north of it, and which, was in consequenee wholly abandoned, both as a civil and military station. It is in north latitude 19°, 20″ and east longitude 84°, 50″, and is placed on a rocky ledge of ground, surrounded by an extensive cultivated plain, bounded by a range of hills, on the west and north at the distance of from five to ten miles, and open to the south and east.

Hills. The western hills are of considerable altitude, and covered with brushwood, and bamboo jungle to their summits, forming a bold continuous outline; those to the north, being undulating, and less elevated. About six miles to the eastward is the sea coast, towards which the plain gradually slpoes; an extensive bank of sand hills, though of inconsiderable height, running along the shore.

Nullahs. There is no river in the vicinity of Berhampore, but there are several nullahs, which are quite dry except during the monsoon, when they become rapid streams, conveying the rain from the western hills, to the Ganjam river. The plain is studded with numerous small tanks, though little is done in the way of irrigation, the crops being allowed to depend upon the rains for the necessary supply of moisture.

The great northern road from Madras to Calcutta, passes close by the western end of the cantonment, and is in excellent order in the vicinity.

Climate. The south-west monsoon sets in at the beginning of June, and continues till September, when it is succeeded

by that from the north-east, which usually terminates by the end of October.

The climate is more healthy and bracing, both to European and native constitutions, than most others in southern India. November, December, January and February are delightful months, the sky being clear, and the atmosphere cool, with heavy dews at night. The thermometer at this time ranges from 50° to 75.° The hot season commences about the end of March, and continues throughout April and May, during which period strong southerly winds prevail, and constitute the only unhealthy portion of the year, when fevers and rheumatism prevail. The thermometer then ranges from 75° to 90° ; the weather is also very sultry and oppressive, between the showers, at the commencement of the rains.

Soil. The soil of the cantonment is dry and gravelly, large heaps of granitic rocks rising through the surface in all directions, especially towards the north-eastern point, which is the most elevated part, the average height of the range being from 40 to 50 feet above the level of the neighbouring plain.

A plentiful supply of good spring water is obtainable throughout the year, in wells of from 10 to 12 feet deep.

Vegetable productions. The vegetable products of the country are rice and a variety of other grains, sugar cane, gram, and oil seeds. The principal trees are the banian, mango, cushoo-nut and the neem. Animals. Of wild animals there are bears in considerable numbers, chetahs, tiger-cats, hyenas, jackalls, hares, &c.

The officers houses though built of mud, plastered over wattles, and thatched, are comfortable dwellings, and particularly cool. To the westward, in which direction the level somewhat descends, are the parade ground, places of arms, store rooms, magazine, solitary cells, staff serjeants quarters, and regimental lines. The magazine is a bombproof building

the others are built of brick and mud, with tiled roofs—The solitary cells are well situated, each is ten feet square, and they are lighted and aired from the top, by small windows.

Native lines. The lines, though lower than the other parts of the cantonment, are elevated with regard to the adjacent country ; they are sufficiently open, spacious, and comfortable, the huts being built of mud, and thatched. There are numerous wells in the lines, the water of which is said to be brackish, but a plentiful supply of good water, is procurable from a large neighbouring tank.

Native town. The native town is adjacent to the northern side of the sepoys lines, and somewhat lower ; it is a large and densely populated place, containing 20,000 souls, chiefly gentoos and woodias. The houses are small, and generally built of mud—(though some few are of brick,)—and the streets are narrow and dirty. Beyond the town on the north side, is a strip of paddy ground, and a considerable swamp extending towards the base of the hills ; malaria however, if engendered in this locality, does not appear to reach the lines, or influence the health of the cantonment. The wind seldom blows from that direction, and when it does, the neighbouring lofty hills, protect the lines from the influence of the swamp.

The town has extensive well supplied bazars, in which all sorts of grain, meat, fish &c. are abundant; it has a manufacture of silk and cotton cloths, and sugar and sugar candy, are also made in large quantities.

The hospital is distant eastward from the place of arms, 1140 yards, it is an oblong building of brick and mud with a tiled roof, containing one ward, 43 feet by 24, a dispensary, 11 by 24, with verandahs in front and rear, 12 feet broad. It is situated in the highest part of the Cantonment, and in an open and airy position, free from all stagnant pools, or other offensive accumulations.

No. 29.—*Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Berhampore, from* 1829 *to* 1841; *exclusive of the years* 1831 *and* 1832.

CLASSES.	DISEASES.	Aggregate strength 9505. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	208	0	415	3								
	„ intermit quot.	735	14	865	12								
	„ tertiana......	22	0	23	0	1004	15	1360	19	2364	34	24 ·871	1 ·438
	„ remittens.....	22	1	30	2								
	„ com cont.....	17	0	27	2								
	Cholera	17	12	47	16	17	12	47	16	64	28	0 ·673	43 ·750
Diseases of the abdominal viscera......	Diarrhœa........	23	3	68	4								
	Dysenteria......	44	6	60	5								
	Obstipatio......	12	0	12	0	156	11	237	11	393	22	4 ·134	5 ·597
	Dyspepsia.......	74	2	85	2								
	Hœmorrhois....	3	0	12	0								
	Hepatitis.......	3	2	7	2	3	2	7	2	10	4	0 ·105	40 ·000
Diseases of the Lungs & Heart..	Catarrhus......	12	0	19	0								
	Asthma.........	13	1	9	0								
	Phthisis pulmonalis..........	4	5	5	2	42	6	36	3	78	9	0 ·820	11 ·538
	Pneumonia.....	13	0	3	1								
Diseases of the Brain.	Apoplexia......	1	1	2	0								
	Epilepsia.......	2	2	1	0								
	Paralysis........	4	1	10	1								
	Amentia,.......	1	0	0	0	13	5	15	2	28	7	0 ·294	25 ·000
	Mania..........	4	1	0	0								
	Hydrophobia...	0	0	1	1								
	Tetanus........	1	0	1	0								
Eruptive fevers......	Variola.........	4	0	6	3								
	Varicella.......	10	0	4	0	23	1	27	3	50	4	0 ·526	8 ·000
	Rubeola.........	8	0	15	0								
	Erysipelas......	1	1	2	0								
Dropsics. ..	Anasarca.......	5	0	19	2	7	1	24	5	31	6	0 ·326	19 ·354
	Ascites.........	2	1	5	3								
	Rheumatismus..	226	2	322	6	226	2	322	6	518	8	5 ·764	1 ·459
Venereal affections ..	Syphilis primitiva..........	80	2	67	0								
	„ consecutiva ..	9	0	14	1								
	Gonorrhœa.....	27	0	30	0	122	2	130	1	252	3	2 ·651	1 ·190
	Hernia humoralis............	5	0	17	0								
	Strictura urethræ..........	1	0	2	0								
Specific diseases.....	Dracunculus....	3	0	2	0								
	Atrophia........	25	1	56	1								
	Scrophula......	4	0	5	1	63	6	125	9	188	15	1 ·977	7 ·978
	Beriberi........	31	5	61	7								
	Lepra..........	0	0	1	0								
Diseases of the eye...	Morbi oculorum	30	0	35	0	30	0	35	0	65	0	0 ·679	0 ·000
Do, „ Skin.	„ Cutis......	173	0	229	0	173	0	229	0	402	0	4 ·229	0 ·000
	Other diseases..	586	5	615	4	586	5	615	4	*1231	9	12 ·951	0 ·731
	Total..	2165	68	3239	81	2165	68	3239	81	5704	149	60 ·010	2 ·612

* Of this number were Phlogosis.... 490 and 4 deaths.
„ „ Ulcus...... 235 „ 2

Per centage of deaths to strength... 1·672

RUSSEL-CONDAH.

Description of the Cantonment &c.

The new cantonment of Russel-condah, is the most western station in the division, and was first occupied subsequent to the Goomsoor war of 1836, having been named after G. Russell Esq., the Commissioner, attached to the army during the campaign. It lies at the foot of a hill, from which it derives its second appellation of condah, and is in north latitude 20°, 00″ and east longitude 84° 40, being distant six miles north of the fort of Goomsoor ; 736 miles from Madras, and 450 from Calcutta; to the nearest sea port, Ganjam, the distance is 56 miles. Its height above the level of the sea, is about one hundred and fifty feet. The surrounding country, is very hilly, the hills varying in height from 500 to 2000 feet, and thickly covered with dense jungle, that in low situations being chiefly jungle composed of bamboos. The soil of the plains, which is alluvial, is sandy and very fertile. For some miles round the cantonment, the plains are cultivated with paddy, and very productive. On the higher grounds, dry grains, sugar cane, cotton, and castor oil are grown. The mango tree is very plentiful and productive, large topes being found every where throughout the surrounding country; when in season, the fruit is the principal food of the natives, and no bad effects have been known to follow its use. The country is well supplied with good water, and the wells in the cantonment, do not become dry throughout the year. Two small rivers pass through the station, on the left bank of one of which the sepoys lines are built, and the other runs through the village of Nowgaum, about a mile and a half distant ; both streams unite about six miles from Russel-condah, and running a very devious course through Aska, flow into the sea at Ganjam; in the hot season these rivers become quite dried up, but in the monsoon they occasionally overflow their banks.

Tanks. Tanks are small, and few, the largest to be seen, is five miles from the cantonment, and measures about two miles in circumference.

Climate. The south-west moonsoon sets in about the middle of June, and is generally over towards the middle of October, the average annual fall of rain has not been ascertained. The weather is cool and pleasant nine months of the year, but hot during the other three, viz. in March April and May, at which time the nights are very oppressive.

The prevailing winds are north-east and south-west, the former blows during November, and is very cold and piercing. Thunder and lightning frequently occur at the commencement of the north-east monsoon, accompained with very heavy showers; in October 1842, this part of the country was visited by a typhoon from the north-west, which did much injury.

Barracks and hospital. The barracks or place of arms, are situated near the foot of a hill, fronting the east, and were first occupied in October 1842. The hospital is also a new building on an elevated platform, about a hundred yards from, and in a parralel line with the barracks; it is well built and commodious, there are two wards placed at right angles, which are large, lofty and comfortable, with verandahs all round, and it is open and well ventilated. The dimensions of the wards are 80 by 18 feet, and 34 by 18, with walls 20 feet high.

In addition to the above, there are two small rooms, used as a bath room and a dispensary; with a cook house and privy; the whole being enclosed by a wall five feet high, distant 30 feet in front and at the sides, and 40 feet in the rear, forming altogether a very complete structure. Both hospital and barracks are built of burnt brick, and tiled. The floor of the small ward is flagged, that of the large one chunamed.

No. 30.—*Table exhibiting the number of Admissions and Deaths amongst the Native Troops at Russel-condah, from* 1837, *(when first garrisoned) to* 1841, *inclusive.*

CLASSES.	DISEASES.	Aggregate strength 4351. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.
Fevers......	Febris ephemera	74	0	146	0	606	7	1260	9	1866	16	42 ·886	0 ·857
	„ int. quot..	499	2	1055	6								
	„ tertian.....	6	0	26	1								
	„ remittens..	12	1	3	0								
	„ com. cont.	15	4	30	2								
	Cholera	56	21	7	6	56	21	7	6	63	27	1 ·447	42 ·857
Diseases of the Abdominal viscera.......	Diarrhœa	40	1	34	2	87	4	102	2	189	6	4 ·343	3 ·174
	Dysenteria.. ...	21	2	29	0								
	Obstipatio......	0	0	1	0								
	Dyspepsia......	23	1	28	0								
	Hœmorrhois....	3	0	10	0								
	Hepatitis.......	1	0	0	0	1	0	0	0	1	0	0 ·022	0 ·000
Diseases of the Lungs	Catarrhus......	9	0	7	0	27	2	15	3	42	5	0 ·965	11 ·891
	Asthma........	4	0	5	1								
	Phthisis pulmonalis.........	5	1	2	2								
	Pneumonia.....	5	1	0	0								
	Dyspnœa.......	4	0	1	0								
Do. of the Brain.....	Apoplexia......	0	0	1	1	6	0	7	1	13	1	0 ·298	7 ·692
	Epilepsia.......	0	0	1	0								
	Paralysis.......	2	0	2	0								
	Amentia........	3	0	3	0								
	Mania.........	1	0	0	0								
Eruptive fevers......	Variola.........	18	1	0	0	105	1	2	0	107	1	2 ·459	0 ·934
	Varicella.......	85	0	1	0								
	Erysipelas......	2	0	1	0								
Dropsies....	Anasarca.......	4	0	8	0	5	0	8	0	13	0	0 ·298	0 ·000
	Ascites.........	1	0	0	0								
	Rheumatismus,	163	0	168	1	163	0	168	1	331	1	7 ·607	0 ·302
Venereal affections..	Syphilis prim..	36	0	26	0	58	2	59	1	117	3	2 ·689	2 ·564
	„ Consecutiva	9	2	6	0								
	Gonorrhœa.. ..	3	0	10	0								
	Hernia humor..	9	0	16	1								
	Strictura urethrae.........	1	0	1	0								
Specific diseases.....	Dracunculus....	7	0	5	0	16	0	27	4	43	4	0 ·988	9 ·302
	Atrophia........	3	0	11	0								
	Beriberi........	5	0	11	4								
	Scrophula......	1	0	0	0								
Diseases of the eye...	Morbi oculorum	26	0	34	0	26	0	34	0	60	0	1 ·378	0 ·000
Do. „ Skin	„ cutis....	102	0	55	0	102	0	55	0	157	0	3 ·608	0 ·000
	Other diseases.	373	1	349	1	373	1	349	1	*722	2	16 ·593	0 ·277
	Total..	1631	38	2093	28	1631	38	2093	28	3724	66	85 ·589	1 ·772

* Of this number were Phlogosis 254—Ulcus... 232
Per centage of deaths to strength, 1·516.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

In the general table No. 1, for Europeans are included the sick of H. M.'s regiment and the first Madras European regiment at Masulipatam, and also those of the Veterans at Vizagapatam ; separate tables have however been given at page 29, 34, and 66, as the sickness and mortality amongst the latter differ exceedingly from those of the troops of the line. The table exhibits the admission into hospital, and the mortality from the principal diseases each half year, for the usual period of ten years, from 1829 to 1838 inclusive. The annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength, are also given ; the average of these as shewn in the Abstract table No. 2, being 184·243, 5·509, and 10·151, respectively.

In 1833 and 1834, these averages were much increased, from the prevalence of cholera, dysentery and fever, and in the remarks appended to the report of Masulipatam, an explanation thereof is given.

During the last four years no European troops of the line were stationed in this division; table No. 23, page 66 shews the nature of the diseases which have occurred amongst the Veterans at Vizagapatam. Of the total deaths therein exhibited 197, the greater number of those, under the head *dysentery,* all under the heads *dyspepsia, hepatitis, apoplexia, paralysis, delirium tremens and ebrietas,* amounting in all to nearly 80, have been occasioned, in the opinion of the Medical Officers in charge, by excessive indulgence in the use of ardent spirits ; many of their reports on this subject are truly melancholy.

On referring to the Abstract table No. 2, it will be

observed that the admissions have amounted to 11670, and the deaths to 643, from an aggregate strength of 6334 men.

The most prevalent diseases have been *fevers, dysentery, venereal complaints, rheumatism, hepatitis, diarrhœa, and cholera;* and the greatest mortality has been produced by *dysentery, cholera, fever, hepatitis, thoracic diseases and diarrhœa;* the per centage from each of which is noted in the table. The admissions are pretty equal during each of the half yearly periods, but fever and dysentery are most prevalent during the second half yearly period; and the excess of mortality in this season of the year is wholly caused by dysentery and fever.

Cholera appeared in an epidemic form in 1830, 1831, 1832 and 1833. In April and May 1830, while the left wing of the first Madras European regiment was marching from Kamptee to Masulipatam, 20 men were buried out of 40 attacked; in August 1831, in the same wing while stationed at Masulipatam, 40 cases of cholera occurred with 6 deaths; again in November 1832, H.M. 46th regiment, while marching from Secunderabad to Masulipatam, lost 15 men out of 34 attacked, and lastly as has already been detailed in a former part of this report, H. M.'s 62d regiment suffered severely from cholera in 1833, on its march to Masulipatam from Bangalore.

Tables No. 3 and 4, exhibit the admissions from the same diseases and the mortality which have occurred amongst the Native troops throughout the whole division for the same period.

Fevers, rheumatism, bowel complaints and cutaneous diseases and beriberi have been the most prevalent diseases, while the greatest mortality has resulted from *fevers, cholera, bowel complaints, beriberi, rheumatism and thoracic diseases.* The total number treated has been 72190, and 2122 have died, from an aggregate strength of 81,806; the average per centage of sick to strength being 88·245. of deaths to sick

NORTHERN DIVISION.

Table No. 1.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838.

Years.			Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	923	0	0	0	0	0	10	36	55	0	0	13	45	12	0	46	8	0	8	98	0	77	38	0	80	397	1010	167 ·920	2 ·889	4 ·851
		2d ,,	773	4	0	9	1	0	3	43	108	0	0	30	19	11	0	37	0	0	16	80	0	16	14	0	95	287				
	Died.	1st half.	22	0	0	0	0	0	2	1	3	0	0	1	1	0	0	2	3	0	0	1	0	2	0	0	0	6				
		2d ,,	27	1	0	2	0	0	1	1	7	0	0	1	0	0	0	2	0	0	0	2	0	0	1	0	1	8				
1830	Admitted.	1st half.	491	2	0	2	40	0	0	23	72	0	0	0	47	3	0	25	0	0	8	63	0	21	5	0	34	143	690	149 ·565	5 ·717	8 ·550
		2d ,,	541	3	3	8	4	0	0	22	51	0	2	0	43	3	0	34	0	0	6	52	0	16	20	0	39	235				
	Died.	1st half.	34	0	1	1	20	0	0	0	5	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	3				
		2d ,,	25	1	2	0	1	0	0	2	8	0	0	0	1	0	0	1	0	0	0	1	0	0	2	0	1	5				
1831	Admitted.	1st half.	610	2	0	7	9	0	0	18	81	0	21	0	12	44	0	71	0	0	5	32	0	40	7	0	52	236	891	165 ·095	5 ·612	9 ·315
		2d ,,	831	1	0	5	48	0	0	45	115	0	15	1	23	42	0	81	0	0	3	40	0	28	23	0	53	308				
	Died.	1st half.	27	2	0	1	0	0	0	0	6	0	0	0	0	1	0	6	0	0	0	0	0	1	0	0	1	9				
		2d ,,	56	1	0	2	11	0	0	0	17	0	0	0	0	2	0	2	0	0	0	2	0	2	4	0	0	13				
1832	Admitted.	1st half.	625	0	0	13	4	0	0	12	64	0	10	9	21	11	0	55	0	0	9	23	0	40	21	0	60	270	904	178 ·429	5 ·145	9 ·181
		2d ,,	988	2	2	6	49	0	0	70	87	0	12	80	19	22	0	16	6	0	18	57	0	186	37	0	51	238				
	Died.	1st half.	30	0	0	3	4	0	0	3	5	0	0	0	2	1	0	6	0	0	0	2	0	1	1	0	0	2				
		2d ,,	53	2	1	3	24	0	0	5	4	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	9				
1833	Admitted.	1st half.	1539	0	31	0	113	0	0	100	173	0	12	279	10	49	0	74	0	0	18	67	0	172	19	0	60	359	924	285 ·173	6 ·603	18 ·831
		2d ,,	1096	2	3	2	37	0	2	36	228	0	5	117	50	39	0	47	1	0	6	38	0	63	19	0	21	380				
	Died.	1st half.	82	0	11	1	27	0	0	3	25	0	0	1	0	0	0	4	0	0	0	2	0	0	1	0	1	6				
		2d ,,	92	1	1	0	10	0	1	3	43	0	2	3	0	3	0	5	1	0	0	0	0	1	2	0	0	16				
1834	Admitted.	1st half.	882	3	1	1	15	5	20	31	61	0	6	122	196	27	0	38	3	0	13	55	0	59	34	0	42	150	707	287 ·694	5 ·948	17 ·114
		2d ,,	1152	5	3	3	3	1	25	13	58	0	14	145	471	222	0	23	1	1	1	30	0	32	12	0	11	78				
	Died.	1st half.	44	2	1	0	1	0	4	1	13	0	0	4	4	1	0	2	0	0	0	1	0	1	6	0	0	3				
		2d ,,	77	5	2	1	0	0	0	1	13	0	0	6	13	21	0	4	0	0	0	1	0	2	2	0	0	6				
1835	Admitted.	1st half.	230	1	10	0	0	0	39	9	9	0	12	3	21	2	8	9	0	0	0	21	0	5	14	0	20	55	321	142 ·056	3 ·917	5 ·607
		2d ,,	226	0	2	1	1	3	11	6	15	0	16	5	54	1	0	11	0	0	0	16	0	2	8	0	11	63				
	Died.	1st half.	9	1	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	3				
		2d ,,	9	0	2	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0				
1836	Admitted.	1st half.	142	1	2	0	0	1	18	1	16	0	8	0	15	5	1	8	0	0	0	18	0	6	3	0	2	37	301	79 ·934	8 ·230	6 ·578
		2d ,,	101	1	0	0	0	0	13	2	6	0	2	0	6	0	0	6	0	0	1	10	0	1	2	0	8	43				
	Died.	1st half.	17	1	1	0	0	0	3	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	1	5				
		2d ,,	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
1837	Admitted.	1st half.	150	0	1	0	0	0	31	3	7	0	5	0	13	0	0	0	0	0	0	18	9	4	5	0	20	43	306	92 ·156	7 ·801	7 ·189
		2d ,,	132	1	2	0	0	1	30	8	5	0	4	0	10	0	0	2	0	0	1	20	0	6	9	0	9	24				
	Died.	1st half.	10	0	1	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1				
		2d ,,	12	1	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	1				
1838	Admitted.	1st half.	107	0	0	1	0	0	19	3	5	0	2	0	6	1	0	3	1	0	0	20	0	8	3	0	7	28	277	75 ·090	6 ·730	5 ·054
		2d ,,	101	1	0	0	2	2	16	4	8	0	0	4	4	0	0	5	0	0	2	24	0	4	3	0	6	16				
	Died.	1st half.	6	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	2				
		2d ,,	8	1	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3				

NORTHERN DIVISION.

Table No. 2.—Europeans—Abstract of the preceding Returns, shewing the total number of admissions and Deaths &c. from 1829 *to* 1838.

	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate strength. 6,334.																										
1829 to 1838. Admitted. 1st half.	5,729	9	48	24	181	6	137	236	546	0	76	426	386	157	1	329	12	0	61	415	0	435	149	0	377	1718
1829 to 1838. Admitted. 2d ,,	5,941	20	15	34	145	7	100	249	681	0	70	382	699	340	0	292	8	1	54	367	0	354	147	0	304	1672
Total..	11,670	29	63	58	326	13	237	485	1227	0	146	808	1085	497	1	621	20	1	115	782	0	789	296	0	681	3390
Died. 1st half.	281	6	15	6	52	0	14	9	62	0	0	6	11	6	0	21	3	0	0	8	0	5	13	0	4	40
Died. 2d ,,	362	13	9	9	47	0	3	13	101	0	2	11	14	26	0	18	1	0	0	8	0	7	16	0	2	62
Total..	643	19	24	15	99	0	17	22	163	0	2	17	25	32	0	39	4	0	0	16	0	12	29	0	6	102
Average per centage of sick to strength.	184·243	0·457	0.994	0.915	5·146	0·205	3·741	7·657	19·371	0	2·305	12·756	17·129	7·846	0·015	9·804	0·315	0·015	1·815	12·346	0	12·456	4·673	0	10·751	53·520
Do. of deaths to sick treated.	5·509	65·517	38·095	25·862	30·368	0	7·173	4·536	13·284	0	1·369	2·103	2·304	6·438	0	6·280	20·0	0	0	2·046	0	2·046	9.797	0	0·881	3·008
Do. per centage of deaths to strength.	10·151	0·300	0·378	0·236	1·562	0	0·268	0·347	2·573	0	0·031	0·268	0·394	0·505	0	0·615	0·063	0	0	0·252	0	0·189	0·457	0	0·094	1·610

NORTHERN DIVISION.

Table No. 3.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	" continued.	" intermittent.	" remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1123	1	0	0	0	0	0	25	10	0	0	8	248	18	0	2	2	0	17	219	0	96	15	0	65	888	6610	34·311	3·218	1·104
		2d "	1145	1	1	44	1	0	0	27	21	0	0	7	309	18	0	1	3	0	19	231	2	70	9	0	48	333				
	Died.	1st half.	37	1	0	0	0	0	0	2	5	0	0	0	3	2	0	1	0	0	0	2	0	2	4	0	0	15				
		2d "	36	0	1	5	1	0	0	1	2	0	0	1	3	1	0	1	0	0	0	4	1	1	1	0	0	13				
1830	Admitted.	1st half.	1006	0	1	13	2	0	0	21	6	0	0	3	202	13	0	1	2	0	18	188	11	72	14	0	70	369	7282	32·353	3·480	1·127
		2d "	1350	1	0	41	1	0	0	22	19	0	12	15	265	55	0	0	3	0	12	224	0	58	16	0	100	497				
	Died.	1st half.	30	0	1	4	1	0	0	1	1	0	0	1	3	1	0	0	0	0	0	3	2	0	4	0	0	8				
		2d "	52	0	0	7	1	0	0	3	4	0	0	0	9	3	0	0	0	0	0	4	0	2	4	0	1	14				
1831	Admitted.	1st half.	1325	0	2	17	2	0	0	13	11	0	3	5	227	18	0	1	3	0	16	172	0	71	7	0	00	667	7444	40·972	4·393	1.800
		2d "	1725	2	2	182	68	0	0	40	21	0	44	7	367	64	0	6	0	0	16	203	0	67	30	0	77	529				
	Died.	1st half.	39	0	3	4	1	0	0	2	2	0	1	1	5	3	0	0	0	0	0	2	0	0	4	0	0	11				
		2d "	95	2	1	11	37	0	0	1	3	0	0	1	9	8	0	1	0	0	0	6	0	0	2	0	1	12				
1832	Admitted.	1st half.	1226	2	4	64	84	0	0	19	17	0	26	1	224	30	0	1	5	0	13	131	0	32	10	0	85	478	6987	41·935	5·973	2·504
		2d "	1701	1	11	170	171	0	0	29	41	0	125	5	297	56	0	0	0	0	21	192	0	78	14	0	81	412				
	Died.	1st half.	58	2	3	8	29	0	0	0	2	0	0	0	3	1	0	0	1	0	0	2	0	0	2	0	1	4				
		2d "	117	1	2	16	66	0	0	0	6	0	0	0	5	3	0	0	0	0	0	3	0	1	2	0	1	11				
1833	Admitted.	1st half,	1952	0	3	58	149	0	0	21	34	0	89	4	353	77	0	7	4	0	29	222	5	126	11	0	115	645	8175	66·593	3·967	2·642
		2d "	3492	2	10	117	19	26	0	37	87	0	518	4	1343	199	0	5	2	0	35	229	0	128	15	0	93	623				
	Died.	1st half.	122	0	3	9	66	0	0	2	3	0	1	0	8	9	0	1	1	0	0	8	2	0	3	0	0	12				
		2d "	94	1	3	10	11	1	0	1	7	0	0	3	20	5	0	2	1	0	0	8	1	2	5	0	0	13				
1834	Admitted.	1st half.	5017	3	21	63	31	259	0	52	80	0	292	16	2751	112	9	5	12	0	18	317	22	152	37	0	141	591	9302	129·187	2·097	2·709
		2d "	7000	2	24	131	15	304	2	76	100	0	476	26	4631	46	11	4	7	0	50	321	3	94	72	0	109	496				
	Died.	1st half.	116	3	0	2	18	0	0	4	18	0	2	1	37	13	0	0	0	0	0	1	1	2	1	0	1	12				
		2d "	136	2	3	14	5	0	0	4	14	0	3	5	46	8	0	0	0	0	0	4	0	2	8	0	1	17				
1835	Admitted,	1st half.	3906	0	12	45	0	364	0	38	44	0	195	13	2043	19	5	2	6	5	27	319	2	87	42	0	92	516	8201	100·207	1·763	1·768
		2d "	4314	2	8	140	2	323	0	73	72	0	353	27	1714	41	4	7	8	2	46	387	0	73	67	0	141	821				
	Died.	1st half.	64	0	0	4	0	0	0	4	5	0	5	1	29	2	0	2	0	0	0	2	0	0	3	0	1	6				
		2d "	81	2	1	15	0	1	0	4	7	0	1	2	21	2	0	1	0	0	1	5	0	5	4	0	1	8				
1836	Admitted.	1st half.	14053	5	29	84	1	536	1	213	431	0	308	175	9124	1128	2	8	12	1	39	508	6	148	69	2	331	892	8805	209·835	2.814	5·905
		2d "	4423	0	45	88	14	304	4	71	86	0	332	42	2026	28	5	4	3	3	61	343	0	54	45	6	136	723				
	Died.	1st half.	393	3	5	5	0	0	0	23	80	0	0	11	203	21	0	1	1	0	0	8	1	0	6	0	10	12				
		2d "	127	0	2	22	7	0	0	3	6	0	2	4	44	2	0	0	2	0	0	11	0	1	4	0	1	16				
1837	Admitted.	1st half.	5808	4	46	76	98	494	5	100	130	0	333	32	2297	60	7	10	10	1	74	568	2	135	63	1	265	997	10607	98·073	2·900	2·757
		2d "	4362	3	28	127	46	187	3	63	78	0	509	12	1510	97	14	8	4	0	98	381	3	132	66	1	159	833				
	Died.	1st half.	170	1	4	17	51	0	0	1	10	0	2	8	39	5	0	3	3	0	1	6	0	1	6	0	2	7				
		2d "	125	2	6	21	23	0	1	3	5	0	4	5	12	6	0	2	0	0	0	8	0	2	6	0	2	17				
1838	Admitted.	1st half.	3456	0	16	41	149	225	3	51	53	0	395	30	883	33	12	3	3	0	30	329	9	108	53	0	203	827	8303	87·426	3·168	2·770
		2d "	3803	2	21	122	36	187	4	43	59	0	631	37	1141	22	4	0	1	0	26	351	12	124	58	0	215	701				
	Died.	1st half.	135	0	5	9	71	0	0	2	4	0	1	1	12	4	0	0	1	0	0	4	0	4	6	0	0	11				
		2d "	95	1	3	17	14	0	1	2	5	0	2	2	15	3	0	0	0	0	0	4	4	1	5	0	1	15				

NORTHERN DIVISION.

Table No. 4.—Natives—Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

	Diseases.													
	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	„ continued.	„ intermittent.	„ remittent.
Aggregate strength. 81.806														
1829 to 1838. Admitted. 1st half.	38872	15	134	461	519	1878	9	553	825	0	1641	287	18352	1508
1829 to 1838. Admitted. 2d „	33318	16	150	1162	373	1331	13	481	584	0	3003	182	13603	626
Total..	72190	31	284	1623	892	3209	22	1034	1409	0	4644	469	31955	2134
1829 to 1838. Died...... 1st half.	1164	10	24	62	240	0	0	41	130	0	12	24	342	64
1829 to 1838. Died...... 2d „	958	11	22	138	165	2	2	22	59	0	12	23	184	41
Total..	2122	21	46	200	405	2	2	63	189	0	24	47	526	105
Average per centage of sick to strength.	88 ·245	0·037	0·347	1·983	1·090	3·922	0·026	1·263	1·722	0	5·676	0·573	39·061	2·608
Do. of deaths to sick treated.	2 ·939	67·741	16·197	12·322	45·403	0·062	9·090	6·092	13·413	0	0·516	10·021	1·646	4·920
Do. per centage of deaths to strength.	2 ·593	0·025	0·056	0·244	0·495	0·002	0·002	0·077	0·231	0	0·029	0·057	0·642	0·128

	Diseases.											
	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate strength. 81.806												
1829 to 1838. Admitted. 1st half.	35	40	59	7	281	3033	57	1027	321	3	1457	6370
1829 to 1838. Admitted. 2d „	38	35	31	5	384	2862	20	878	392	7	1168	5974
Total..	73	75	90	12	665	5895	77	1905	713	10	2625	12344
1829 to 1838. Died...... 1st half.	0	8	7	0	1	32	6	9	39	0	15	98
1829 to 1838. Died...... 2d „	0	7	3	0	1	57	6	17	41	0	9	136
Total..	0	15	10	0	2	89	12	26	80	0	24	234
Average per centage of sick to strength.	0·089	0·091	0·110	0·014	0·812	7·206	0·094	2·328	0·871	0·012	3·208	15·089
Do. of deaths to sick treated.	0	20·000	11·111	0	0·300	1·509	15·584	1·364	11·220	0	0·914	1·895
Do. per centage of deaths to strength.	0	0·018	0·012	0	0·002	0·108	0·014	0·031	0·097	0	0·029	0·286

NORTHERN DIVISION.

No. 5.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 1915. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Admissions and deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class.	Average annual per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers......	Febris ephemera	33	0	36	0								
	,, intermit quot.	227	6	451	12								
	,, tertiana......	24	0	94	1	444	13	958	41	1402	54	73 ·211	3 ·851
	,, remittens.....	35	3	223	21								
	,, continua......	125	4	154	7								
	Cholera	15	1	6	1	15	1	6	1	21	2	1 ·096	9 ·523
Diseases of the abdominal viscera.......	Dysenteria acuta	75	15	83	20	98	18	92	22	190	40	9 ·921	21 ·052
	,, chronica......	23	3	9	2								
	Diarrhœa.......	47	2	33	2								
	Colica..........	8	1	3	0								
	Obstipatio.......	8	1	8	0								
	Hœmorrhois....	24	0	20	0								
	Enteritis........	2	0	6	0	147	6	122	3	269	9	14 ·047	3 ·345
	Peritonitis......	0	0	0	0								
	Gastritis........	0	0	5	1								
	Dyspepsia.......	58	2	47	0								
	Hepatitis acuta.	41	2	19	1	58	2	47	4	105	6	5 .483	5 ·714
	,, chronica......	17	0	28	3								
Diseases of the Lungs and Heart	Catarrhus......	13	2	9	0								
	Asthma........	4	0	8	1								
	Phthisis pulmonalis.........	3	3	5	5								
	Hœmoptysis.....	1	1	0	0								
	Pleuritis........	0	0	1	0	60	11	34	6	94	17	4 ·908	18 ·085
	Pneumonia......	36	5	5	0								
	Carditis........	0	0	0	0								
	Palpitatio......	2	0	2	0								
	Dyspnœa.......	1	0	4	0								
Diseases of the Brain.	Apoplexia.......	6	5	7	7								
	Epilepsia.......	12	0	3	0								
	Paralysis.......	22	0	21	5								
	Cephalalgia	17	0	17	1								
	Phrenitis........	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	1	0	1	0	188	17	144	14	332	31	17 ·336	9 ·337
	Mania..........	3	0	0	0								
	Hydrophobia...	0	0	0	0								
	Delirium Tremens.........	24	7	18	1								
	Ebrietas........	103	5	77	0								
Diseases of the Eye..	Morbi oculorum..........	14	0	5	0	14	0	5	0	19	0	0 ·992	0
Do. ,, Skin	,, cutis........	6	0	7	0	6	0	7	0	13	0	0 ·678	0
Eruptive Fevers......	Variola.........	0	0	0	0								
	Varicella........	0	0	0	0								
	Rubeola.........	0	0	0	0	0	0	1	0	1	0	0 ·052	0
	Scarlatina......	0	0	0	0								
	Erysipelas......	0	0	1	0								
Dropsies....	Anasarca.......	16	4	10	1								
	Ascites.........	2	0	2	0	19	5	12	1	31	6	1 ·618	19 ·354
	Hydrothorax....	1	1	0	0								
Rheumatic affections.	Rheumatismus acutus........	52	2	50	2								
	,, chronicus....	81	1	50	1	133	3	100	3	233	6	12 ·167	2 ·575
	Neuralgia......	0	0	0	0								
	Odontalgia......	0	0	0	0								
Venereal affections..	Syphilis primitiva.........	14	1	12	2								
	,, consecutiva...	1	0	4	1								
	Gonorrhœa.....	56	0	22	1	82	1	45	4	127	5	6 ·631	3 ·937
	Hernia humoralis..........	11	0	6	0								
	Strictura urethræ.........	0	0	1	0								
Specific diseases.....	Atrophia........	13	2	7	5								
	Beriberi.........	2	0	4	2								
	Elephantiasis...	0	0	0	0								
	Lepra..	0	0	1	0								
	Dracunculus....	1	0	0	0	19	3	15	8	34	11	1 ·775	32 ·352
	Ulcus phagedenicum........	0	0	0	0								
	Scrophula......	0	0	1	0								
	Scorbutus......	3	1	2	1								
Punishment.	Punitus........	2	0	2	0	2	0	2	0	4	0	0 ·208	0
Wounds and injuries...	Fractura........	0	0	4	0								
	Luxatio.........	3	0	1	0								
	Subluxatio......	1	0	10	0								
	Vulnus sclopitorum........	1	0	0	0	81	2	45	0	126	2	6 ·579	1 ·587
	,, incisum......	7	0	2	0								
	Contusio	68	2	27	0								
	Ambustio	1	0	1	0								
Other diseases, including Phlogosis, Ulcus, &c............		145	4	77	2	145	4	77	2	*222	†6	11 ·592	2 ·702
	Total.......	1511	86	1712	109	1511	86	7112	109	3223	195	168 ·302	6 ·050

Per centage of deaths to strength during these five years, has been 10·182.

* Of this number were

Phlogosis..............	43	2
Do. Do. Ulcus.........	140	2
Do. Do. Bubo simplex.	18	0
Total.......	201	4

† The deaths under this head, include besides those accounted for in the preceding note, one from diabetes, and one from dysuria.

NORTHERN DIVISION.

No. 6.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 45.308 — 1st Half. Ad.	Dd.	2d. Half. Ad.	Dd.	Admissions and deaths from each class of disease. — 1st Half. Ad.	Dd.	2d. Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average annual Per centage of sick to strength.	Average annual per centage of deaths to sick.
Fevers......	Febrisephemera	1527	10	2304	12								
	,, intermit.quot.	16482	318	10424	135	20243	400	13804	189	34047	589	75 ·145	1 ·729
	,, tertiana	616	2	598	3								
	,, remittens.....	1352	48	334	21								
	,, continua.	266	22	144	18								
	Cholera........	282	143	113	49	282	143	113	49	395	192	0 ·871	48 ·607
Diseases of the Abdominal Viscera......	Dysenteriaacuta	598	87	346	32	734	117	395	37	1129	154	2 ·491	13 ·640
	,, chronica......	136	30	49	5								
	Diarrhæa.......	454	34	326	16								
	Colica..........	167	2	192	2								
	Obstipatio......	128	0	174	4								
	Hœmorrhois.....	39	1	35	0	1042	46	1077	29	2119	75	4 ·676	3 ·539
	Enteritis........	2	2	3	3								
	Peritonitis.	0	0	0	0								
	Gastritis........	1	1	3	0								
	Dyspepsia......	251	6	344	4								
	Hepatitis acuta.	25	5	20	3	28	6	23	3	51	9	0 ·112	17 ·647
	,, chronica......	3	1	3	0								
Diseases of the Lungs and Heart	Catarrhus......	114	3	115	9								
	Asthma	52	4	123	6								
	Phthisis pulmonalis..........	8	5	19	9								
	Hœmoptysis....	7	1	4	0	263	21	309	27	572	48	1 ·262	8 ·391
	Pleuritis........	0	0	0	0								
	Pneumonia.....	53	4	20	1								
	Carditis.........	1	0	1	0								
	Palpitatio	0	0	1	0								
	Dyspnœa.......	28	4	26	2								
Diseases of the Brain.	Apoplexia.	12	7	9	7								
	Epilepsia	5	0	7	1								
	Paralysis........	34	4	31	3								
	Cephalalgia	59	0	31	1								
	Phrenitis.	1	0	0	0								
	Ictus solis..	0	0	0	0	163	16	115	17	278	33	0 ·613	11 ·870
	Amentia.	14	2	9	2								
	Mania..	29	3	14	0								
	Hydrophobia ..	0	0	1	1								
	Delirium tremens.........	9	0	13	2								
	Ebrietas........	0	0	0	0								
Diseases of the Eye..	Morbi oculorum	190	1	281	1	190	1	281	1	471	2	1 ·039	0 ·424
Do. Skin.	,, cutis......	1880	0	1405	1	1880	0	1405	1	3285	1	7 ·250	0 ·030
Eruptive fevers......	Variola.........	41	2	18	4								
	Varicella.......	258	0	39	0								
	Rubeola........	21	1	42	1	326	4	114	5	440	9	0 ·971	2 ·045
	Scarlatina......	0	0	0	0								
	Erysipelas......	6	1	15	0								
Dropsies....	Anasarca........	110	12	90	15	116	13	102	17	218	30	0 ·481	13 ·761
	Ascites.........	6	1	11	1								
	Hydrothorax...	0	0	1	1								
Rheumatic affections.	Rheumat acutus	1187	11	952	14								
	,, chronicus....	914	10	831	18	2104	21	1797	32	3901	53	8 ·609	1 ·358
	Neuralgia.......	0	0	0	0								
	Odontalgia... ..	3	0	14	0								
Venereal affections..	Syphilis primitiva..........	365	3	244	5								
	,, consecutiva	25	3	29	2								
	Gonorrhœa.....	105	1	94	1	640	7	477	11	1117	18	2 ·465	1 ·61
	Hernia humoralis..........	130	0	96	2								
	Strictura urethræ.........	15	0	14	1								
Specific diseases.....	Atrophia.	124	14	126	15								
	Beriberi........	309	37	608	89								
	Elephantiasis...	0	0	0	0								
	Lepra..........	7	0	5	0								
	Dracunculus....	35	0	38	0	500	51	808	106	1308	157	2 ·886	12 ·003
	Ulcus phagedenicum........	3	0	7	0								
	Scrophula......	22	0	22	2								
	Scorbutus......	0	0	2	0								
Punishment	Punitus........	21	0	20	0	21	0	20	0	41	0	0 ·090	
Wounds and injuries ..	Fractura........	18	0	7	0								
	Luxatio	9	0	3	0								
	Subluxatio	92	2	96	0								
	Vulnus sclopitorum..........	137	10	53	2	1032	14	760	6	1792	20	3 ·955	1 ·11
	,, incisum......	167	1	130	2								
	Contusio.......	564	1	423	2								
	Ambustio.......	45	0	48	0								
Other diseases, including Phlogosis, Ulcus, &c...........		2676	18	2302	34	2676	18	2302	34	*4978	+52	10 ·987	1 ·044
	Total....	32240	878	23902	564	32240	878	23902	564	56142	1442	123 ·911	2 ·568

Per centage of deaths to strength during these five years, has been 3·182.

* Of this number were

Phlogosis....	2640	14
Do. Do. Ulcus.......	1418	11
Do. Do. Buho simplex.	494	4
Total......	4552	29

+ The deaths under this hea[d] include, besides those accounte[d] for in the preceding note, fiv[e] from tetanus, four from splenitis three from cynanche, two fro[m] vermes intestinorum, one fro[m] diabetes, one from fistula, in an[o] one from cystitis, one fro[m] hernia, one from hæmatemesi[s] one from icterus, and one fro[m] laryngitis; the remaing two a[re] not particulharized.

treated 2·939, and of deaths to strength 2·593. In the year 1836, the sickness and mortality were greatly above the average, occasioned solely by fever, from which the native troops employed in the Goomsoor campaign, during that year, suffered very severely.

The admissions and deaths are most numerous in the first half yearly period, and chiefly from acute disease, with the exception of beriberi, which prevails most during the latter months of the year. It is thought proper to give here a few remarks on *beriberi*, and also a few observations on the *jungle or bilious remittent fever* of Goomsoor.

Beriberi. The disease called *Beriberi*, being endemic at the several stations on the coast, throughout the Northern Division, from the Kistnah river to the Chilka lake, a short account of it may appropriately be given in this place; and the following observations are taken from an unpublished essay on the disease, forwarded to the Medical Board in the year 1831.

The word Beriberi is derived from the Hindoostanee name of a sheep (*b,here,*) from a fanciful notion, that persons affected with the disease, walk like a peculiar species of that animal, i. e, with a kind of jerking motion—but the name by which it is known, to the Gentoos of the coast, *Ooboowaioo*, simply means, rheumatism combined with dropsical swelling.

This disease, though endemic in many situations, frequently appears also as an epidemic, after the setting in of the rains, or from July to the close of the year, when fevers, dysenteric complaints and cholera also break out, to a greater or less extent annually—and they would all seem, to have a common origin, viz. malarious exhalation, though modified in the several forms of the diseases enumerated.

The stations of Chicacole, Samulcottah and Berhampore, which are low, damp and more or less swampy, appear to suffer more than the other towns in the division, though none of the stations, whatever may be their position,

are wholly exempt from it. And it is found in all situations more or less, and at all seasons of the year, and extends it is said, to about 40 miles inland.

Natives appear to suffer from beriberi more than Europeans, and the inhabitants of the coast more than those of inland situations; the sepoys, natives of the upper provinces of Bengal, frequently escaping altogether, whilst amongst the coastmen it was prevailing extensively. Relapses are of very frequent occurrence, coming on usually at the close of the monsoon.

Beriberi appears to be a disease of middle life, and instances of its occurrence under the age of 17 years, or above 50, are very rare, and no cases have been seen in females, though doubtless, they must suffer from it as well as the other sex, though perhaps in a less degree.

The disease occurs both in an acute and chronic form; the acute form of beriberi, being usually attended by fever, of an intermittent type, and of 4 or 5 days duration, whereas, the chronic form is more frequently the sequela of rheumatism, or of fever, either of the intermittent or remittent form.

Acute form of Beriberi.

Beriberi of the acute form, whether preceded by an attack of fever, or suddenly appearing without premonitory symptoms, is characterized by swelling of the extremities, both upper and lower, but more particularly of the legs, which pit on pressure, with numbness of the integuments of the swollen parts, extending upwards ; and there is frequently paralysis of the feet and legs, and of the hands and fore arms, which rarely however extends to the trunk. The muscles of the limbs to the patient's feelings are tense, and there is an extreme sense of lassitude, and indisposition to use any exertion.

The more urgent form of the disease, which frequently attacks persons of robust frame, and previously in the enjoyment of good health, is usuallly attended with extreme dyspnœa, and a feeling of anxiety and throbbing at the precordia; there is also great anxiety expressed by the counte-

nance, the pulse is from 100 to 120, full and bounding, and it imparts a peculiar thrilling sensation to the finger, as does also the action of the heart, on the hand being placed on the chest; cases of this form of the disease usually terminate in sudden death, often occurring after slight exertion, from effusion into the pericardium, or into the cavity of the thorax; the urine is always high coloured and scanty in such cases.

When not of so urgent a character as that just described, paralysis of the legs and arms begin to be manifest after a few days, the limbs lose their power, and the patient can neither carry his hands to his mouth, nor can he stand without support, if placed in the erect posture; and in making an endeavour to walk, the limbs which yield to the weight of the body, and bend backwards, are raised with the peculiar jerk, before alluded to.

A patient in this state, if unsupported, instantly falls to the ground in a sitting posture, and however far the disease may have progressed, the paralysis never extends to the muscles of the trunk, and the sitting posture can consequently always be preserved; neither has the dropsical swelling been found to extend to the integuments of the trunk, or to terminate in ascites.

Another, and frequently a distressing symptom, is pain in the muscles of the lower limbs, complained of generally as being most severe in the tendo Achillis; and though not often witnessed in native patients, European subjects, suffer from constant and severe spasms of the limbs.

The post mortem appearances, have been found to be slight effusion into the cavities of the chest, with œdema of the lungs throughout, the structure of the heart is found to be natural; the right side being filled with dark blood, the left empty; the liver engorged with dark blood, and in some cases great anæmia of the kidneys. Effusion of a ropy serum into the pericardium is also a common morbid result.

Chronic form of Beriberi.

The chronic form of Beriberi as before stated, is usually the sequela of rheumatism or fever, though it oc-

casionally comes on insidiously. The most prominent symptom being partial paralysis of the extremities, both upper and lower, commencing in the hands and feet, and extending towards the trunk, which is succeeded by wasting of the solids, and ultimately by anasarcous swellings of the limbs, and effusion into the chest and pericardium. This form of the disease may exist for several months, and recovery in such cases is extremely slow, and where death follows, the unfortunate sufferer is usually reduced to an extreme state of emaciation and helplessness, the power of the limbs being completely lost.

The various functions of the body continue to be performed regularly, though imperfectly, and with considerable loss of tone; the pulse is small and weak, ultimately becoming a mere thread, when felt at the wrist, and it often happens that the only complaint made by the unfortunate sufferer, is of pain in the lower extremities, the muscles of the calves of the legs and tendo Achillis, being the chief seat of the uneasiness.

The spongy state of the gums, indicating a scorbutic condition of the system, which has been said by some to exist in this disease, has not been seen, though enquiry was particularly directed to that point; but there is no doubt that in many cases a cachectic state is present, which is followed by atrophy, and extreme debility.

Neither has the inflamed or congested state of the spinal canal, noticed by* Malcolmson been witnessed, though the condition of the spine has been carefully examined, by means of pressure and percussion—and enquiry as to the existence of pain along the spine, has failed in eliciting any proof of the existence of irritation, or inflammation of the spinal nerves.

Treatment. In the acute form of beriberi as above described, the most active antiphlogistic treatment is often called for, at the commencement of an attack, and by which alone a fatal termination can be prevented. If a patient therefore, who after an illness of a day or two, perhaps only of a few hours

* Essays on beriberi, 1835 p. 113.

duration, is seen to be suffering from urgent dyspnœa, with a feeling of anxiety at the precordia, having a full bounding or throbbing pulse, and whose face probably appears bloated, or œdematous, from 12 to 18 ounces of blood should immediately be abstracted, and the bowels freely acted on by an active cathartic; ℨi. of compound jalap powder, or calomel with jalap. After which, calomel with squills, should be given and continued until the system is brought fully under the influence of the mercury, when in most cases a decided improvement usually takes place.

Calomel gr. ij. to iij. Pulv. scillæ gr. ii. to iii. with aromatic confection to be taken every 4th hour.

In natives, it is rarely requisite to repeat the V. S, if the first bleeding be sufficiently copious, to relieve the oppressed condition of the circulating system. The bowels should be kept free, by occasional aperients throughout the treatment, and to assist the diuretic action of the medicine, drink acidulated with the supertartrate of potash, may be allowed and this plan of treatment must be persevered in, till the inordinate action of the heart and arteries is subdued, which will be found to succeed on the first appearance of the mercurial action being established in the system; should the dropsical effusion at any time show a tendency to increase a draught consisting of,

Tincturæ digitalis ♏ x
,, Scillæ ♏ xx
Spiritus ætheris nitrici ʒ ss
Aquæ menthæ piperitæ ℥ i may be given thrice in the day

Should the patient complain of spasms, or rheumatic pains in the limbs, or should the calomel act more on the bowels than is desirable, dovers powder may be ordered at bed time, or a small quantity of the extract of opium, may be added to the pills. Frictions to the limbs with stimulating embrocations, and foot baths in which the root of the morunga tree* has been boiled, will be found to afford relief; and during convalescence, or where a tendency to febrile exacerbations occur periodically, much benefit will result from the use of the sulphate of quinine, in small

* Hyperanthara Moringa an excellent substitute for the *radix armoraciæ*.

doses, or occasional antimonials, in addition to the other remedies employed.

During convalescence the greatest benefit will be found from the effect of change of climate, which should be resorted to in every case in which it may be practicable.

The diet should be light and nutritious.

In chronic beriberi, whether succeeding to other diseases, or appearing as a specific complaint, the symptoms are rarely of so urgent a character as to call for the use of the lancet, though if the breathing be oppressed, and there is also much vascular excitement, the abstraction of a few ounces of blood will be found to afford decided relief.

The constitutional treatment should be commenced by an alterative course of the blue pill, combined with diuretics; the bowels which are often torpid should be kept free by some mild aperient, for which purpose rhubarb in the well known compound, called "Gregory's powder," answers well; —it will, in cases of this nature, seldom if ever be requisite to push the mercury to the extent of causing salivation.

Acting on theoretical views, leeches have frequently been applied over different parts of the spine, and blisters, have been repeatedly placed over the same region, without it is believed, any benefit resulting from these measures.

The local means to be used are frictions to the limbs, with camphorated oil and terpentine, and the warm stimulating foot baths before mentioned.

The rheumatic symptoms also require attention, and benefit will in some cases be found to result, from the use of the pulv. ipecac comp. or compound guaiac electuary.

The diet may be generous, light and nutritious, and to those accustomed to stimulants, wine or spirits in limited quantity may be allowed, with any appropriate tonic during convalscence, the best of which is sulphate of quinine, with sulphuric acid.

The native remedies *black oil*, and *treeak-farook* having been employed extensively, in the chronic form, and during convalescence from beriberi, or after the stage of excitement has been removed, and in many cases with considerable advantage, may here be briefly noticed.

The oleum nigrum, a black empyreumatic oil, is obtained by distillation per descensum, by means of a strong fire, from a combination of spices, with the seeds of the malcungrunny, and gum benzoin. It is given in doses of from 5, increased to 30 drops, 3 times during the day, and is usually taken by the natives made into a bolus with aromatic confection, or taken on a betel leaf; the diet observed by them during its use, is entirely farinaceous, as wheaten bread, or cakes, and made without salt. The action of the oil appears to be that of a stimulant, it is also diuretic, and produces a feeling of internal heat, attended with high coloured urine, and in some cases suffusion of the conjunctivæ, but it has no apparent effect either on the bowels or skin.

The treeak-farook, a remedy said to be imported to this country, from the shores of the Red sea, and Persian gulph, is obtained in most bazars throughout India, but is supposed to be often spurious; it is said to consist of a farrago of various spices and stimulants, and is given combined with rhubarb, in the proportion of about 1 part, treeak-farook to 7 of rhubarb, made into an electuary, or bolus, with honey, the dose being the size of a nutmeg every morning; it usually acts as a purgative or laxative, in addition to which some patients complain of a feeling of internal heat, in the chest and abdomen, and after continuing its use for 3 or 4 days, it often causes a good deal of irritability, with increase of the pulse; and a feverish heat of skin; two patients complained of its having caused them to pass bloody urine, this however occurred only once in each person, and the correctness of the statement could not be satisfactorily ascertained, and the appearance may have been owing to the effect of the rhubarb. It is usual with natives to take this medicine

for 9 days, and then to omit it for the same length of time, and so to continue it in successive alternations, as long as necessary.

The diet recommended by the natives was observed whilst using these remedies, and consisted of milk and farinaceous food, such as wheaten bread without salt, and abstinence from meat.

Goomsoor fever. A rebellion having broken out in Goomsoor, a country belonging to an independent chief, lying at the north-western part of this division, it was found necessary at the end of the year 1835—to send a force amounting to nearly 7000 native troops, into the disturbed districts, where was employed until the end of the following year.

Goomsoor, through which the continuation of the western ghauts runs at a distance of about 45 miles from the coast, may be divided into the upper and lower conntry That portion lying at the foot of the ghauts, in which the troops were chiefly employed, is covered with dense jungle, (principally of bamboos) where fever of a deadly character prevails, and which occasioned a great mortality both in officers and men. The table land above the ghauts, here rising to the height of from 1500 to 2,000 feet, above the level of the sea, is more open and is found to have a cool and bracing climate;the inhabitants are a savage race,(called " Khonds") and the country itself affords but little in the way of supplies necessary for the wants of an army.

The following extracts from a report by the Superintending surgeon of the division, in which are embodied the opinions of several of the medical officers, of the force, respecting the character of the fever, which so extensively prevailed in Goomsoor, contain some interesting remarks; but as no troops have occupied the country since 1836, with the exception of one native corps at the station of Russel-condah on the eastern boundary of the district, it has not been considered necessaryto enter more into detail respecting the history of the disease.

The sickness and mortality in Goomsoor in 1836, having considerably influenced the results shown in the general tables of diseases,both of the division and of the Army at large, it has been considered desirable to advert to it briefly in this place.

Extract from the report of the Supg. Surgeon Northren division December 1836

" It now remains that I should give an account of the fever which has proved so nearly universal, and so severe, to all those exposed to its causes. The symptoms vary in different situations, and in different constitutions ; but it is, for the most part such as I saw it, at Nowgaum, a fever of debility, and congestion, mainly affecting the head ; and caused by endemic poison. Mr. McKenna says," " It is difficult to give any satisfactory reasons for that want of energy, extreme debility and mental depression, which characterized almost every case; the febrific miasm acting equally upon the nervous, and sanguiferous systems, exhausting in a short space of time, the whole stock of sensorial power." Mr. Kellie says, " It was characterized by entire and frequently immediate prostration of strength, skin preternaturally cold and damp, pulse small and rapid, and frequently weak, tongue sometimes furred, always foul and in some instances florid, voice in many instances sepulchral, patient inclined to doze ; complete reaction but in few instances followed the above symptoms ;" speaking of the Durgurpersaud fever Mr. Kellie says " the head was invariably the organ chiefly affected." Mr. Porteous says " the symptoms complained of by the patient on admission, were, great langour and lassitude, pain over the whole body, head-ache, thirst, great prostration of strength, oppression, shortness and difficulty in breathing with a foul tongue and parched fauces, and cold chills over the whole body, in many cases amounting to rigors, the patient continued in this state for a longer or shorter period, and then followed the hot and sweating stages of fever, after which he felt much better, but weak and depressed" such however was not always the asthenic character of this

fever." Mr. Eyre says "among the sepoys of the 50th regiment Native infantry who came into the field, for the most part, strong and in high condition, found more strength of action, the pulse generally hard and full; besides the symptoms above enumerated there was commonly conjestion of the liver, of the lungs, and indeed universal internal conjestion, the urine scanty and high coloured, the excretions from the bowels of all colours, the tongue presented various appearances, one of which was a bright red glazed surface, as if the papillæ had been completely obliterated, it was also frequently overspread with a coating, like white paint, or a thick composition of chalk and water; either laid on in patches, or in longitudinal streaks; where free from this coating, the glossy surface before described, appearing."

"The type of this fever was usually intermittent and quotidian, often times however remittent, and at others, continued, with a low typhoid character; long protracted or repeated attacks of fever frequently terminated in dysentery, or looseness, caused by irritation of the mucous coat of the intestines; and these were mostly fatal cases. The subjects of this fever frequently became œdematous and dropsical, before the fatal termination. Among Europeans, the symptoms were usually more violent, with greater determination to the head, and more strength of arterial action."

"The treatment varied, according to the several forms of the fever; leeches and cold lotions to the head, emetics, and purgatives, calomel, antimonial powder, ipecacuanha, tartar emetic, in appropriate doses, were given during the presence of fever, sponging the body with vinegar and water, and cold effusions were used. When intermissions or remissions of the fever were present, bark, and quinine, alone, or variously combined with stimulants, or laudanum, were exhibited, the quinine was given in doses of from two to thirty grains. Mr. Eyre went as far as thirty grains, for a dose, I cannot however think that these large doses, were benefical. Where there was greater strength of arterial action, as among Europeans,

and in the sepoys of the 50th and some others, the lancet was employed; and from ten to twenty ounces of blood, taken from the arm."

Cholera prevailed in an epidemic form in 1832, 1833, 1837 and 1838, and partially in 1831. The disease attacked the 12th regiment N. I. while marching through the division to Jaulnah in January 1832, and carried off 23 men out of 74 affected ; in November and December in the same year, the 49th regiment while stationary, lost 24 men out of 70 attacks. Again in the month of January 1833, the 43d regiment N. I. while marching from Secunderabad lost 15 men out of 24 attacked; and in the following month (February) the 14th N. I. while marching to Cuddapah buried 17 men, 46 having been attacked; in the month of March in the same year, the 8th regiment N. I. stationed at Vizianagrum, lost 10 men from 22 attacked ; again, out of the number of admissions and deaths from cholera in the first half of the year 1837, no less than 35 attacks and 20 deaths occurred in the 6th regiment N. I. at Vizianagrum ; and lastly in Januury and February 1838, the 27th N. I. buried 70 men out of 148 attacks while marching from Bangalore to Samulcottah ; the disease had almost entirely ceased before entering the Northern division.

The tabular statements No. 7 and 8, exhibit at one view, as in the preceding divisions much interesting information, relative to the most important diseases amongst both European and native trops.

Tables No. 5 and 6, exhibit the admissions and deaths from each disease in the various classes therein given, as in the preceding reports, for the period of five years from 1834 to 1838 inclusive. The total sick from each class is also shewn, with the mortality, and the per centage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, (Table No 5) the greatest number of admissions have been from the class of *fevers, bowel*

complaints including *hepatitis, rheumatic affections venereal complaints, and wounds and injuries ;* the most fatal have been *fevers, bowel complaints, diseases of the brain and of the lungs.* The per centage of sick to strength, during the five years has been 168·302, of deaths to sick treated 6·050, and of deaths to strength 10·182 ; thus differing but little in these respects, from the results shewn in the preceding table for ten years.

The corresponding table for the native troops, (No. 6) gives 123·911, as the number of admissions annually for every 100 men, and 2·568 per cent of deaths, to the sick treated, while the per centage of deaths to strength during the same period has been 3·182 ; the total admissions being 56142, with 1442 deaths, from an aggregate strength of 45308 men. The greatest mortality has been produced by *fevers, cholera, bowel complaints, beriberi and rheumatism ;* the greatest number of admissions have been from the same classes of disease, along with *cutaneous and venereal affections.*

The tabular statements No. 9 and 10, have been framed from these two tables, in the same way as in the preceding reports, and exhibit at one view the proportion and the per centage of admissions and deaths from the principal classes of disease.

NORTHERN DIVISION.

Statement shewing the extent of accommodation, diet, &c. in the several Jails.

STATION.	Number of prisoners the prison is capable of containing in separate sleeping cells.	Number of prisoners the prison is capable of containing where more than one prisoner sleeps in one cell.	Dietary or other weekly allowance and weekly cost per head.	Allowance of clothing and bedding, and cost per head.	Description of employment and hard labour.	Hours of labour, and of exercise.
MASULIPATAM.	None.	280 males and 24 females.	1 Seer of rice per day with 4 pice for condiments average weekly cost per head about 6 annas.	2 cloths of 3 yards each, 1 cumbly and 1 cap yearly; mats for sleeping on whenever required annual cost per head about 1 rupee and 6 annas.	Road making street cleaning, &c.	In moderate weather from 7 to 11 A. M. and 2 to 6 P. M. but during the hot weather from 6 to 10 A. M. and from 3 to 5 P. M.
RAJAHMUNDRY.	None.	420	1 Seer of rice and 4 pice daily for a male prisoner and to every female prisoner ¾ seer, and 4 pice. Average weekly cost to a male about 8 annas and a female 6 annas 8 pice: Boys receive the same as men.	Male prisoners are allowed two cloths, a mat, and a cumbly. Annual cost 15 annas 4 pice. Female prisoners receive a cloth of the value of 6 annas: every half year, bedding the same as the male prisoners.	Working on the roads and at the repairs of the court house cutting down fort walls, and filling the ditch, cleaning the streets of the town &c.	From the 14th April to 15th June 1841 the prisoners work from 6 to 11 A. M. and from 3 till 5 P. M. after which they wash in the river, both before and after the above dates, they work from 8 to 12 A. M. and 1 to 5 P. M. on Sundays permitted to walk about on the jail compound.
VIZAGAPATAM.	One.	270 Conveniently.	One Seer of rice and 4 pice per day, the same for men and women. Weekly cost 8 annas and 2 pice.	2 Pieces of cloth of 6 cubits each and 1 cumbly for a male prisoner every year—annual cost 1 rupee 12 annas 2 pieces of cloth 12 cubits each for a female prisoner 2 rupees and cumbly 12 annas.	Sentenced prisoners work on the high roads, and security prisoners in or about the jail.	From 8 A. M. till 4 P. M. daily and Sundays excepted.
CHICACOLE.	Ten.	350 Conveniently.	¾ Of a seer of rice and 6 pice for condiments daily.	Two pieces of cloth of 6 cubits each, and one cumbly every year.	Convicts labour on the roads, and in the manufacture of paper and bricks.	From 8 A. M. till 4 P. daily. Sundays excepted.

NORTHERN DIVISION.

Table shewing the number of Persons successfully vaccinated from 1829 *to* 1838 *inclusive.*

DISTRICT OR STATIONS.	Class and sex of Patients.						Total vaccinated.	
	Christians.		Hindoos.		Mahomedans.			
	Males.	Females.	Males.	Females,	Males.	Females.	Males.	Females.
Ganjam	64	57	9,466	7,611	144	72	9,674	7,770
Vizagapatam	211	163	8,613	7,388	106	54	8,930	7,605
Injeram and Madepollum	27	29	15,345	11,107	96	89	15,468	11,225
Rajahmundry	26	31	15,461	10,853	220	128	15,707	11,012
Masulipatam	161	118	9,165	8,587	781	454	10,107	9,159
Total	489	398	58,050	45,576	1347	797	59,886	46,771

Number of Vaccinators in each District.

	1st Class Vaccinators.	2d Class Vaccinators.
Ganjam	1	3
Vizagapatam	1	3
Injeram and Madepollum	1	3
Rajahmundry	1	3
Masulipatam	1	3
Total	5	15

The number vaccinated in this Division, during these ten years is 1,06,657; the whole expense incurred, amounts to Rupees 44,940 which gives an average of about Rupees 42—2 per hundred, or ten pence per head in English money.

APPENDIX.

Meteorological Observations, made at Masulipatam in 1843.

	Barometer.			Thermometer.				Amount of rain.	Number of days on which rain has fallen.	Prevailing Winds.	
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.	Mean daily range.	Inches.	Days.	A. M.	P. M.
January	30 ·14	29 ·97	30 ·05	81	71	76	7	1.02	2	N. E.	S. E.
February	30 ·97	29 ·97	30 ·06	82	71	76 ·5	8 ·25	0	0	N. E.	S. S. E.
March	30 ·02	29 ·86	29 ·94	86 ·5	75	80 ·5	7	0	0	S. S. E.	S. E. by E.
April	30 ·02	29 ·84	29 ·93	90	77	83 ·5	8	0.25	1	S. S. W.	S. S. W.
May	29 ·87	29 ·16	29 ·51	92 ·5	79 ·5	86	6 ·5	3.09	8	S. W.	S. S. E.
June	29 ·83	29 ·65	29 ·74	92	80	86	5 ·75	2.50	10	N. W.	S. W.
July	29 ·81	29 ·61	29 ·71	87	78	82 ·5	4	7.31	15	N. W.	W. S. W.
August	29 ·88	29 ·68	29 ·78	89	79	84	6	7.15	13	N. W.	S. W.
September	29 ·94	29 ·73	29 ·83	90	79	84 ·5	6	1.69	8	N. W.	S. E.
October	30 ·06	29 ·72	29 ·89	85	76	80 ·5	3 ·5	7.42	17	N. E.	S. E.
November	30 ·06	29 ·94	30 ·00	83	71	77	8 ·5	0	0	N. E.	S. E.
December	30 ·16	29 ·96	30 ·06	79	70	74 ·5	7 ·5	6.10	5	N. E. & N. W.	E. S. E.

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May.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	80	87½	0	S. & N. W,	At 4 P. M. a strong north-wester with rain.
2	78	88½	90	S.W. by W.& S.	Fair.
3	82½	88	0	S.	,,
4	84	90	88	S.	,, Calm.
5	83	88	0	W. S.	Calm and Cloudy.
6	84	92	88	S.	,, ,,
7	82	90½	88		,, ,, afternoon clear.
8	85	91	90	S.	Clear.
9	86	90	88	S. S. W.	Cloudy.
10	84	86	84	S.	Clear.
11	86	88	86		,,
12	85	95	91	S. W.	,, and Calm.
13	89½	89¼	95	W. S. W.	Hot wind in afternoon, heat oppressive.
14	92	99	98	W. N. W.	,, ,, ,,
15	94	98	94	W.	,, ,, ,,
16	93	96	91½	S. W. &. S.	
17	92	94	91	W.	Hot land wind under wet tatties.
18	92	94	0	W.	,, ,,
19	90	93½	96	E. &. S. E.	
20	89	94½	94	S. E. &. S.	
21	88	93	90	S. &. S. W.	
22	88	90	88	S.	
23	88	90	84	S. by N. W.	Cloudy, a north wester with heavy rain at 3 P. M. during which Ther. fell to 80°.
24	84	88½	86	E. S. E.	
25	84	90	88	E. S. E.	
26	83	93	84	E. S. E. by N.W.	3 P. M. a north-wester with rain.
27	86	95	0	S.	Much lightning in afternoon, no rain.
28	86	96	0	S.	,, ,, ,, ,,
29	84	95	0	S.	
30	88	94	0	S.	
31	88	91	0	S.	

Thermometer highest between 2 and 3 P. M.

June.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	86	92	0	S.	Cloudy.
2	84	90	93	S. & S. E.	,,
3	89	92	0	S. E.	,,
4	0	94	0	S. E.	Clear.
5	88	94	0	S.	,,
6	86	92	91	S.	,,
7	84	90	90	S.	Cloudy, rain at night.
8	0	94	0	S.	Clear.
9	82	86	0	Calm.	Cloudy with occasional showers.
10	88	87	0	S.	Squally with rain—much thunder.
11	84	89	0	S.	
12	84	87	84	S.	
13	85	90	86	S.	
14	87	91	0	S.	Heavy rain at night.
15	86	91	0	S.	Clear.
16	84	91	0	S.	,,
17	85	90	0		Calm cloudy.
18	84	87	0		,,
19	81	82	0	S.	,,
20	84	87	0	N. W.	
21	88	84	0	N. W.	Cloudy with occasional showers.
22	83	88	80	N. W.	Heavy rain.
23	83	88	0		Clear.
24	84	88	0	Calm.	Cloudy.
25	83	87	0	S. W.	,,
26	84½	93	82	S. W. and N. W.	,,
27	82	86	84		,, some showers of rain.
28	84	88	0	S.	,,
29	83	87	0	S.	,,
30	82½	86½	0	S.	,,

Thermometer at its greatest height about 3 or 3½ P. M.

July.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	83	88	0	S. W.	Cloudy.
2	86	89	0	S.	Strong wind, with rain in the afternoon.
3	82	85	0		
4	82	86	0	S. W. and N. W.	
5	82$\frac{1}{2}$	87	0	do. do.	Cloudy, rain.
6	82	88	0	do. do.	,, ,,
7	82	90	0	Calm.	,, ,,
8	82	88	0	S. W.	,, ,,
9	82	86	0	S. W. and N. W.	Rain in afternoon, from N. W.
10	80	87	0		,, ,,
11	84	90	0	Variable.	Clear.
12	89	91$\frac{1}{2}$	91$\frac{1}{2}$	do.	Cloudy.
13	85	88	0	do.	,,
14	86	89$\frac{1}{2}$	0		,,
15	88	89	87	N. E.	Clear in the forenoon, afternoon cloudy.
16	86	87$\frac{1}{2}$	85	N. E.	Cloudy.
17	78	78	78	N. E.	Much rain.
18	78	80	78	N. W.	,,
19	79	84	83	N. W.	Clear and dry.
20	82	86$\frac{1}{2}$	86		Clear.
21	84$\frac{1}{2}$	89	86	Calm.	
22	82	86	0	S.	Cloudy.
23	82	85	0	S.	,,
24	82$\frac{1}{2}$	86$\frac{1}{2}$	0		,,
25	83$\frac{1}{4}$	87	0	Calm.	Rain in afternoon.
26	82	86$\frac{1}{2}$	0		Rain.
27	82	84	0		Light rain.
28	80	83	0		Cloudy.
29	80	83	0	S. W.	,,
30	79	82	0	S. W.	,, and light rain.
31	80	82	0		,, ,,

August.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	79	82½	0	S.	Cloudy.
2	81	82	0		,, light rain.
3	80	83	0	Calm.	,, no rain.
4	81½	86	0	S.	Clear.
5	82	85½	0	S. E.	,, occasional light showers.
6	82	84½	0	Calm.	Bright.
7	82	83	0		Cloudy and rain in the afternoon.
8	78	81½	0		Constant heavy rain.
9	80	86	0		Clear.
10	82	87	0	S.	Showers.
11	82	86	0	S.	Cloudy and some rain.
12	84	87	0		Clear.
13	83	89	0	S.	,,
14	84	89	0	S. W.	,,
15	85	88	85	S. E.	Cloudy.
16	84	84	82		
17	81	83	82	S.	,, heavy rain to the northward.
18	83	87	84	Calm.	Some rain.
19	84	86	83	S.	Clear.
20	83	86	0	S.	,, rain in the afternoon.
21	84	87	86	S. E.	,,
22	83½	86	85	S. E.	,,
23	83½	85	0	S.	
24	78	80	0	S.	,, distant thunder.
25	77	78	0	S.	Heavy rain last night and this day.
26	80	82	0		,,
27	80	82½	0	Calm.	,,
28	83	85	0		Cloudy.
29	81½	86	0	S.	Clear—fresh breeze.
30	81	86	0	E. S. E.	,,
31	81	88	0	S. E. by E.	

September.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	83	85	0	E. & S. E.	Clear fresh breeze.
2	84	87	0	S. E.	Forenoon clear—afternoon heavy rain & thunder.
3	82	85	0	N. E.	Heavy rain from North East.
4	82	83½	0	N. E.	Do. Do.
5	81	86	84	S. E.	Clear.
6	81	86	0	S. E.	
7	82	85	0	S. E.	Cloudy.
8	82	85½	0	Calm.	Do. some showers.
9	83	86	0	S. W.	Do. strong fresh breeze.
10	83	86	0	W. S. W.	At 7½ A. M. a slight shock of an earthquake was felt accompanied by a noise like distant thunder towards the S. W.
11	83½	85½	0	S. W.	Cloudy close.
12	81	84	0	N. E.	Much rain.
13	80	83	0		Do.
14	78	82	0		Do.
15	81	82	0	N. E.	Do.
16	80	81	0	N. E.	Do.
17	80	82	0	N. E.	Some rain.
18	79	80	80	N. E.	Do.
19	80	82	0	Calm.	Cloudy.
20	82	84	0	do.	Do.
21	83	88½	0	do.	Do.
22	84	88	87	N.	Clear a thunder storm with rain at 6 P. M.
23	82	86	86	N.	Do.
24	80	86	87	Calm.	Do. rain in the afternoon with thunder.
25	82	86	79	N. W.	Do. thunder storm at 2 P. M.
26	80	85	86	Calm.	Do.
27	82	87½	0	do.	Do.
28	82	88	87	do.	
29	84	88	82	S. E.	Thunder storm with heavy rain at 3 P. M. from [the Northward.
30	82	86	0	N.	Clear.

October.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	82	87	0	N.	Cloudy.
2	84	88	82	N. E.	Forenoon clear—a thunder storm at 3 P. M.
3	82	85	80	N. W. to N. E.	Cloudy rain in the afternoon.
4	81	86	0	N.	Do.
5	82	85	81	N. W.	Some rain.
6	78	82	80	N.	Cloudy—light showers.
7	78½	84	0	N.	Clear. [continued till morning.
8	82	86	0	N. by S. E.	Sea breeze at 2 P. M. Ny. winds at 8 P. M. and
9	80	84	0	N. by S. E.	Do. Do.
10	79½	85½	0	N.	Clear sea breeze at 3. P. M.
11	81	85	0	Calm.	Sultry.
12	81	84	85	Do.	Do. clear.
13	82	85½	0	Do.	
14	80	85½	0	Do.	Close and oppressive.
15	81	86	85	Do.	Do. sea breeze in the afternoon.
16	80	85	0	Do.	
17	73½	82	83	N. E.	Clear—wind cold at night from the northward.
18	74	82	84	N. & N. E.	
19	76	83	0	N.	Clear.
20	76½	83	0	N.	Do.
21	77½	82	82		Cloudy.
22	76	82	0		
23	78	82	0	N. W.	Cloudy fresh breeze.
24	76	82	0	Do.	Do. Do.
25	79	81½	83	N.	Clear—sea breeze in the afternoon.
26	82½	83	0		Do. Do.
27	77	84	84	N.	Do. Do.
28	78	84	0	Ny. & S. E.	Do. Do.
29	78	83	84	do.	Do. Do.
30	79	83	80	do.	Cloudy light rain.
31	77	83	0	N.	Clear—wind dry and warm by day at night cold.

November.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	75	82	0	N.	Clear—nights cold thermometer 6 A. M. 69°.
2	73	81½	82	N.	Do. Do.
3	73	82	83	N. E.	Do. Do.
4	75	81	81	N.	Do. Do.
5	72	80	81	N.	Cloudy.
6	73	79	80	N.	Do.
7	76	84	82	N.	Clear—sea breeze from 11 A. M. to 4 P. M.
8	78	82	80	N. E.	
9	73	80	80	N. E.	Clear—thermometer at 6 A. M. 69°.
10	72	78	79	N.	Do. dry and parching wind.
11	71	78	0	N.	Do. Do. Do.
12	71	77	79½	N.	Do. thermometer at 6 A. M. 63°.
13	70	78	77	Ny.	
14	74	79	77	do.	
15	73	78	76	do.	
16	74	78	78	do.	Clear wind from the Northward at night sea
17	71½	78	79½	do.	breeze during the afternoon.
18	74	80	81	do.	
19	74	79	78	do.	
20	74	81	73	do.	
21	70	78	77	N. E. by S. E.	Do.
22	73	77	78	N. E.	Thermometer at 6 A. M. 63°.
23	68	76	78½	do.	
24	70	76	76	do.	
25	68½	77	76	do.	Clear weather—thermometer at 6 A. M. 59½°.
26	70	70½	76	do.	Do.
27	71	75	75	do.	Do.
28	73	78	76	do.	Do.
29	73	82	81	do.	Cloudy.
30	74	74½	74	Ey.	Some rain.

December.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	71	74½	0	E.	Clear—sea breeze rain last night thermometer 7 A. M. 73°.
2	65	68	67		
3	64	69	68	N. E.	Thermometer 63°. at sun rise.
4	66	69	0	do.	
5	64	70	0	N. W.	
6	68	77	77	do.	
7	70	78	76	Ny.	
8	72	76	74	do.	
9	65	75	74	do.	
10	66	74	74		
11	67	73	72	N. E.	
12	68	74	74	N.by E.	
13	67	75	0	do.	
14	68	76	0	do.	
15	69	76	0	do.	Clear weather, wind northerly at night and easterly during day.
16	69	74½	0	do.	
17	69	75	74½	do.	
18	69	76	0	do.	
19	67	76	75	do.	
20	68	78	77	do.	
21	69	76	75		
22	70	80	80		
23	73	79	78		
24	72	78	0		
25	72	76	0		
26	68	76½	75		
27	65	73	0	N E.	
28	66	74	72½		
29	68	72½	71	N. W.	Change from mild weather to cold N. E. wind's blowing fresh.
30	68	72	72	do.	
31	68½	75	0		

January 1828.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	68	77	0	S. E. & Ny.	
2	70	76	0	do.	
3	70	78	76	do.	Cloudy, wind northerly by night easterly by day.
4	72	77	75	do.	
5	74	77	0	S. E. & E. S. E.	
6	75	80	0	Do.	Strong sea breeze from E. S. E.
7	76	81	0	Do.	
8	74½	80	76	S. E.	Cloudy.
9	75	79	77	S. E.	do.
10	74	80	76		
11	75	80	75		Wind Ny. at night from S. E. by day.
12	70	74	0		
13	67	73	72	N.	
14	62	74	74½	N.	
15	70	76	75		Ther. 6 A. M. 62°.
16	72	77	76		
17	70	79	76	N. E.	Clear.
18	73	80	78	Ny. & S. E.	Cloudy.
19	70	74¼	73½	do.	Do. sea breeze in the afternoon.
20	70	73	73	do.	do. do.
21	70	73	73	do.	do. do.
22	69	69	68		Cloudy, light rain.
23					
24	70	76	75		Dry warm winds.
25	72	84	82	S.	do.
26	73	88	83	S.	do.
27	75	88	82	N. E. by S.	do.
28	73	82	80	S. E.	
29	68	76	7[illegible]	do.	
30	66	75	74	do.	Clear.
31	66	76	75	do.	

February 1828.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.	
1	70	76	76	S. E. & Ny.	Fair weather, winds S. E.. during the day Ny. at night.	
2	68	77	75	do.		
3	67	75	75	do.		
4	70	82	81	S. E.		
5	72	82	81	do.		
6	73	81	81	do.		
7	74	80	0	do.		
8	75	79	79	E.	Cloudy, light rain.	
9	75	73½	0	do.	Do. Do.	
10	73	79	77	do.	Clear.	
11	71	76	75		Do.	
12	76	80	78	E. S. E.	Cloudy.	
13	75	80	79		Heavy fall of rain.	
14	74	79	0		Cloudy, light rain.	
15	72	78	77	do.	Do.	
16	72	78	76		Do.	
17	73	74	0	E. S. E.	Do.	
18	71½	77	78	Sy.	Cloudy, light rain.	
19	74	78	8		Light rain.	
20	76	80	81	S. E.		
21	74	82½	82			
22	76½	82	0	S. E.		
23	76½	80	0		Heavy rain at 9 P. M.	
24	75	83	0			Heavy dews.
25	76	84	82½	S. W.	Rain from N. W.	
26	77	84	83	S. E.	Heavy rain last night.	
27	75	80½	0		Rain.	
28	76½	82	75		Occasional heavy showers,	
29	76	80½	0	N. E. & S. E.	Clear.	

March 1828.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	75	82½	79	Ny. and S. E.	Fair weather, wind Ny. at night Sy. by day.
2	72¼	79½	79	N.	
3	70	83	80	do.	
4	71	80½	0	Ny.	
5	70	81	81	do.	
6	70	81	80	do.	
7	74½	82	80	N.	
8	74	82	83	N.	
9	75	85	87	N.	Close oppressive, wind warm.
10	74	86	86	N. and S.	Wind Ny. dry and warm till at 1 P. M. when it changes to S. E. thermometer at 7 A. M. about 70°
11	76	89	84	S. and Sy.	
12	75	88	88		
13	80	90	90		
14	80	86	86		
15	78	86	86	Ny. and by E.	Winds Ny. warm and dry.
16	76	88	86		
17	74	86	86	E.	
18	80	86	86		
19	80	88	86	S. E.	do.
20	81	88	86	E.	
21	82	88½	87	E.	
22	82	89	86	S. E.	do.
23	83	91	87	S. E.	
24	80	87	88	S. E. by S.	
25	82	87	84½	do.	
26	82	86	84½	E.	Clear.
27	77	88	84	E.	do.
28	78	87	84½	E.	do.
29	83	87	86	E.	Cloudy.
30	82	86	84	E. and by S.	do.
31	80	80½	81	Calm.	Light rain.

April 1828.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	78	83	79	Sy.	Severe thunder-storm at 1 P. M. during which the ther. fell to 79°.
2	80	84½	81½	Calm.	Cloudy, light rain.
3	80	88	88	E. & by S.	Forenoon cloudy, afternoon clear calm & sultry.
4	80	92	86	do.	Clear, wind warm from S. E.
5	79	85	86	S. E. by S.	Cloudy.
6	80	86	86	S. by S. E.	Clear, fresh breeze. (days 6–8)
7	80	90	88	S. E. by S.	
8	82	90	85	S.	
9	82	90	87	S. by W.	Clear, hot wind at noon.
10	82	90	88	S. E.	
11	82	93	90	S.	Clear, fresh breeze.
12	85	91	89	S.	Sultry.
13	86	91	87	S. E.	Cloudy, a gale of wind from 6 P. M. till mid night,
14	83½	88	86½	do.	do. do. with thunder & lightning.
15	83	90	86	W.	Land winds in the forenoon, yesterday from 1 P. M.
16	81	88½	87	E.	Fair. (days 16–17)
17	83½	88	85	S. E.	
18	84	89	86	do.	do. Light rain.
19	83	91	88	E. by S. E.	
20	87	91	89	S. E.	
21	87	90	91	N. by W.	Land wind from 5 P. M. yesterday.
22	86	92½	90	E. by S.	Clear fresh breeze.
23	87	93	90	E. S. E.	do. do. light rain.
24	86	94	89	do.	do. do. a north western in the afternoon.
25	84	92	86	S.	Cloudy, a north western at 4 P. M. with a few drops of rain.
26	86	91	85	S. E. by E.	do. do. at 4½ P. M. with rain.
27	86	92	89½	S. E.	
28	86	92	89	do.	Clear, wind high. (days 28–30)
29	85	93	89	S.	
30	89	94	94	do.	

May 1828.

Date.	Thermometer degrees. 9 A. M.	Noon.	4 P. M.	Wind.	Remarks.
1	85	92	90	S. E.	Clear, calm.
2	88	96	91	W.	Winds westerly in the forenoon, easterly in the afternoon.
3	87½	92	89	S. E.	Clear, fresh breeze.
4	88	92	90	S. E. by S.	
5	88	93	88½	S.	
6	89	92	87	S.	
7	88	91	90	S. E.	Clear weather strong breeze.
8	88	90½	90	E. S. by E.	
9	88	92	88	S.	
10	89	93	90	S.	
11	89	92	89	S.	
12	90	91	88	S.	
13	86	88½	88	S. E.	Few drops of rain.
14	87	90	88	S.	
15	88	90	91	S.	
16	89	89	87	S. E.	Thunder storm or squall from the N. W. with heavy rain at 7 P. M.
17	86	93	90	W. & S.	Forenoon wind westerly, afternoon southerly and clear.
18	87	92	80	S by W.	A fine gale with heavy rain at 4 P. M. from the west, which continued to blow till 6 A. M.
19	85	89	86	S. E. by E.	
20	86	89	86	do.	Clear, wind moderate afternoon cloudy.
21	87	89	88	E.	Clear.
22	86	90	87	E. S. E.	
23	87	91	90	E.	do. close and sultry.
24	88	91	89	E. S. E.	Cloudy.
25	89	93	89½	E.	Clear fresh breeze.
26	88	92½	90	S. E.	do. do.
27	91	93	88½	S.	do. do. afternoon cloudy.
28	89	93	90	S.	do. do. do.
29	89	93	90	S.	do. do. do. country has a parched apearance.
30	89	92	89	S. E.	do. do. do.
31	89	91	89	S. E.	Clear fresh breeze.

HYDERABAD.

General description of the Hyderabad territories.

The country of Hyderabad, including the provinces of Hyderabad and Beeder, and also part of Aurungabad, Candeish, and Berar, in its extreme limits, extends between the 15th, and 21st 30″ degrees of north latitude, and the 75th, and 81st 30″ of east longitude. It is somewhat of a quadrangular shape, but the sides are so very irregular, as to defy description.

Boundaries and extent.

It is bounded on the east, by the country of the Rajah of Nagpore, the Wurda and Godavery rivers separating the two countries;—on the north by part of the Nagpore country, Meiwar, and a part of Candeish; on the west, lie the Bombay territories; and on the south the Ceded districts, Kurnool, Guntoor, and part of the northern division of the Madras provinces, the Toombuddra and Kistnah rivers throughout a great part of its southern limit, forming the natural boundary.

Its average length may be estimated at 320 miles, from north to south, and its breadth 270, from east to west, containing an area of about 90,000 square miles.

The general surface of the country is irregularly hilly, being elevated from 1,800 to 2,000 feet above the level of the sea; but there are no mountains of any great height to be seen. The rocky hills so common throughout all parts of this province, consist chiefly of dark coloured granite, found in most places in large detached blocks, and in others, pervaded by dykes of green stone, which are frequently of great extent.

The soil in general, between the granitic hills, is extremely fertile, and when capable of being irrigated, and in situations where alluvial deposits are collected, produces rich crops of rice.

The following account of the geological features of the province of Gundwana, is from the pen of Dr. Voysey.

Geological observations.

"The granitic part of this country may be called both mountainous and hilly, and in the plains and valleys are found, elevations which are miniatures of the loftier ranges. These ranges are few in number, and remarkably interrupted and irregular, their extent inconsiderable, and their height above the level of the sea, about 2,500 feet, most of them falling far short of that height. Single isolated hills, and groups with round and conical summits, are by far their most common features.

"Although the complete isolation of these hills and groups, first strikes the observer as being the prevailing character, on a closer examination it will be found, that the apparently isolated hills are connected at their bases, by scarcely distinguishable elevations, pursuing the north-west and south-east direction, common to them and the larger ones.

"They are extremely bare and rugged in their outline, and consist of piles of rocks, lying on enormous masses of concentric granite. In the process of decomposition, these form *tors, and logging stones,* of a singular appearance.

"The hill on which the fort of Bhowanighur is built, and that of Maul-Ali, 2017 feet above the level of the sea, may be taken as specimens of the isolated hills and groups; and the ranges of Mulkapore and Golcondah, as specimens of the continued. The only parts of the country which are entitled to the name of plains, are those in the neighbourhood of the rivers, being formed by their inundations, and therefore of small extent.

"The above description applies to the greater part of the granite country; the ranges of granite, however, which run north-east and south-west, from Guntur-gundwana, forming the pass of the Kistna at Beizwara, and that of the Godavery at Papkunda, are of a different character; being less interrupted, more elevated above the plains, and although

not higher above the level of the sea, are altogether of a different structure. Their sides are very precipitous, and oblige the traveller to use his hands and knees for a considerable portion of the ascent, though their outline is not rugged, and the logging stones and tors, of the former mentioned granite, are not visible.

" The cantonment of Bolarum five miles north of Secunderabad, is one of the highest inhabited parts of the granite country, and from thence to the northward, gradually decreases in height as far as Munackpet, the same takes place more suddenly at Mulkapore to the eastward, and at Patancheroo to the north-west.

" The city of Hyderabad, close to the walls of which the river Moosey runs, is by barometrical measurement, 1,672 feet above the level of the sea, and the cantonment of Secunderabad, 1,837, which agrees with Colonel Lambton's trigonometrical measurement, within 19 feet.

" The outline of the basaltic trap hills, is smooth and rather flattened, with a few conical elevations in the range; or they consist of an accumulation of round hills, with deep ravines intersecting and separating them. They are covered with long grass to their summits. Their course is the same with the granite they cover, but it frequently happens that no regular direction can be perceived. The sandstone country and rocks are flat, the sides of the hills steep, with extensive gaps in the course of their ranges, at times, nearly reaching to their bases; their direction is north-west and south-east, or nearly so, and it is probable, that they extend over a considerable portion of the south-east part of Gundwana.

" The lakes are all artificial, and are found only in the granitic and sandstone country ; they are usually formed by uniting two projecting points of low hills, which nearly separate the upper half of a valley from the lower, by enormous causeways of granite, or mounds of earth, which collect the different streams rushing from the hills during the rainy sea

son, forming sheets of water, of from three to ten miles in circumference. This mode of retaining water artificially, is probably coeval with the first increase of population in this country, as the small supply derived from wells, would not be equal to the cultivation of rice, which is the only grain extensively produced in the granitic soil. After the rains, the loss they sustain from irrigation, evaporation, &c. is supplied by infiltration, nevertheless, many become dry before the monsoon season returns. Those tanks which are neglected, and no longer supply rice-fields, are speedily covered with the large leaves and flowers of the nelumbo-indica, othelia alismoides, and other aquatic plants: their waters acquire a noisome smell and unwholesome taste. The number of tanks, and their state of repair, afford a fair criterion of the prosperity of the country.

" They are less frequent in the sandstone country, and the unirrigated cultivation is accordingly more abundant.

" In the basaltic trap they are rarely seen, and the irrigation of rice when cultivated, is performed solely by wells.

" The fertility of the soil which composes the cultivated districts, of the granitic part of this province, depends greatly on the facility with which the rock of which they are formed, becomes decomposed. The soil is silicious, but varies as much as the granite rock itself, and yields but few spontaneous productions. The rich valley of Mulkapore forms an exception, and it may be said, that usually, the spontaneous fertility is in the inverse ratio of height above the level of the sea.

" The following is an analysis of a garden soil at the cantonment of Secunderabad, which has not received much manure.

" Specific gravity of soil 1.70. Four hundred and eighty grains contained viz:

Of water of absorption......................	10 *grs.*
Stones consisting of quartz and felspar........	255 ,,

Vegetable fibre......................................	2	,,
Silicious sand..	154	,,
	421	

The surface of Hyderabad is an elevated table-land, hilly but not mountainous, with a climate of a more moderate temperature than its latitude would indicate.

The country in general may be said to be thinly wooded; and there are no jungles of any great extent, and no forest trees to be found, except in the northern parts, and the but little known, north-eastern direction; extensive topes of date and palmyra trees, are however to bc found every where.

Tanks and lakes. There are innumerable tanks, and of all sizes throughout the country, formed as above mentioned, by embankments thrown up between ranges of hills or elevated grounds,* but with the exception of the Purkal lake, about 120 miles north-east of Hyderabad—there are no natural reservoirs of water to be met with, and but few swamps. The Purkal, a body of water of great extent and considerable depth, gives rise to a stream called the Kussera or Over,—which as well as several other large streams, taking their rise both in the eastern and western direction, join the Kistnah river, which enters the sea south of Masulipatam. The watcr in general, both of tanks and wells throughout the country, is of good quality.

Rivers. The principal rivers are near the northern boundary, as the Poorna which flows through the rich valley of Berar, and unites with the Taptee at Chandway in Meiwar; the Wurda, which runs along the western boundary, dividing Hyderabad from the country of Nagpore, and which unites with the Godavery near a place called Serlouncheh. The Pyne-gungah, takcs its rise in the north-western part of the country, and flowing eastward joins the Wurda near

* The most remarkable of these are the Hussain Saugor tank lying between the cantonment of Secunderabad and Hyderabad, which is several miles in circumference, and irrigates a great extent of paddy ground; and another tank to the west of the city of Hyderabad, the bund of which is formed by 21 horizontal arches—19 of which are 150, and the other 2, 100 feet in span. This body of water is 17 miles in circumference when the tank is full. It is filled by a canal from the Moosey river, and supplies the city with water. It was constructed at an expense of 8 lacs of Rupees.

Warra. The Godavery, the most considerable river in Southern India, takes its rise in the mountainous parts of Aurungabad, and flowing eastward, intersects the country of Hyderabad, and after receiving innumerable tributary streams, the principal of which are the Manjeera, the Ghurkpurna, and Wurda, it flows south-eastward, into the Bay of Bengal, below Rajahmundry. The Kistnah, next in size and importance, also rises in the western ghauts, in the province of Beejapore, and takes a direct easterly course through the southern part of the Hyderabad country, being joined by the Beema and Toombuddra rivers, which also have their origin in the same range of ghauts, the former uniting with it at Culloor, and the latter at Mooricondah; many smaller streams also flow into it, amongst which, is the Moosey or Hyderabad river, which joins the Kistnah below Warrapilly;—after which it inclines somewhat to the northward, and making a considerable sweep then proceeds south, and enters the sea at Masulipatam.

Roads. The military roads passing through the Hyderabad country, are kept in a state of excellent repair at all times. The principal road is that, running from Secunderabad to Madras, viâ Warrapilly and Ongole; and along this line, excellent bungalows have been erected at each stage, for travellers. A branch from this road strikes off near Nacracul, and proceeds by Beizwarra to Masulipatam, along which are also good bungalows at the several stages. Proceeding northward to Nagpore there are two good roads, one viâ Nandair, and the other by Nirmul. The latter road however, can only be travelled with safety from January till the end of May, or previous to the setting in of the south-west monsoon, owing to the danger of contracting remittent fever, at the other periods of the year, in passing through the extensive Nirmul jungle. This jungle commences about five miles from Nirmul, on the summit of the ghaut of the same name, and extends to within two or three miles of Yedulabad, the total distance between these places being 46 miles and 2 furlongs.

The road viâ Nandair, being open, and free from dense jungle, may be travelled with safety at all seasons, and though circuitous, is consequently preferred. A good road also proceeds north and by west to Jaulnah.

A road running southward, divides at a place called Juddacherlah into two branches, one leading to Bellary and Bangalore, the other to Kurnool and Cuddapah; Bungalows have not been erected on these lines. In addition to these various roads, others intersect the country in all directions, running between the different stations of the Nizam's army, and the principal towns.

The travelling distance from Secunderabad to Madras, viâ Ongole, is 399 miles; to Masulipatam viâ Beizwarra 221; to Nagpore, via Nirmul 323½; and by Nandair 420; to Jaulnah by Oodghir 263; to Bellary, viâ Adoni 229½; and to Cuddapah, viâ Kurnool 256½.

Wild animals. The wild animals do not differ from those usually met with in Southern India, tigers, cheetas and antilopes are however very numerous; and in the unfrequented country to the north-east, wild buffaloes are also to be found. The wild elephant is not known in this part of the Deccan.

Subsidiary force. The British connexion with this country, commenced in the latter half of the last century, during the long contest for supremacy, between the French and English powers;—and about the year 1798, a treaty was entered into with the Nizam, under which a certain number of troops, commanded by European officers, and instructed in European military tactics, were agreed to be kept up; and again, a further treaty was made in 1800, when the subsidiary force was fixed at 8000 infantry, and 1000 cavalry; a certain portion of territory having been ceded for their maintenance.

The Hyderabad subsidiary force now consists of two distinct bodies of troops.—His Highness the Nizam's army; and the regular troops of the line, European and native, belonging to the Madras presidency.

The Nizam's army consists of five regiments of irregular cavalry—four companies of native artillery—eight regiments of native infantry, a company of hill rangers, and one of pioneers ; the whole of which are officered by Europeans from the regular armies of the three presidencies.—The stations occupied by the Nizam's troops, are Bolarum, Aurungabad, Goolburgah, Ellichpore, Monidabad, Mucktul, Lingasore and Hingolee.

The medical officers of this service not being under the Madras government, no reports or returns are received at the Medical Board office from them, nor do the records contain any information relative to the medical topography of the stations above mentioned, which, consequently do not fall within the scope of this report.

The stations occupied by the troops belonging to the Madras presidency, are Secunderabad and the adjoining cavalry cantonment of Bowenpilly, and Jaulnah.

SECUNDERABAD.

Cantonment of Secunderabad, and vicinity.

This cantonment, the head quarters of the Hyderabad subsidiary force, is situated in north latitude 17° 26″, and east longitude 78° 32″. The city of Hyderabad lies 6 miles to the southward, separated from the Residency, usually called Chudderghaut, by the river Moosey, over which an excellent bridge has been erected under the superintendence of Major Oliphant, late of the Madras Engineers.

The military cantonment of Bolarum, occupied by the Nizam's troops, lies about 5 miles north-east, and the cavalry cantonment of Bowenpilly, 2 miles north-west.

The surrounding country is wild and picturesque, being interspersed with small hillocks of granite, over the entire of its surface. The soil is principally silicious on the higher grounds, and many of the scintillating stones are to be

Madras Lithographic Press.

Plan of the
CANTONMENT OF SECUNDERABAD.

found on the surface, such as quartz, agate, calcedony, flint, rock-crystal, also felspar and mica. To the westward, distant about 3 miles, is a range of hills consisting of granite rocks, heaped one on the other, in a variety of strange and fantastic shapes. On the north-east, are two very remarkable large granitic hills, of a semispherical shape, lying about three miles asunder, and completely isolated. They are both of considerable height, having buildings on their summits, in which are the tombs of several fakeers. The nearest, *Maul Ali,* as it is called, is the largest, the other hill named *Emaum Zameen,* is about one fifth less in size; and at these places, particularly the first, a large concourse of Mahomedans meet annually for religious purposes.

Tanks. The province as already mentioned is well supplied with tanks, with which the whole face of the country is studded, in every variety of shape and size.

Palm-trees. There are three kinds of palm trees met with, two of which are very common, but the other the *Cocus Nucifera,* can only be reared by great care and attention. The date tree *(Phœnix Dactylifera)* grows wild over the whole country, as does also the *Palmyra,* from both of which toddy and coarse sugar are prepared. Different kinds of banyans, and the margosa are also common. The custard apple (annona squamosa) is indigenous, and grows in great abundance over the whole face of the country, and in seasons of scarcity, this fruit is said to have saved thousands of the poor from starvation.

Climate. The south-west monsoon commences generally at Secunderabad in the beginning of June, and continues at intervals, till about the middle of October. During November and December, the sky is frequently cloudy, and the winds easterly; and sometimes also in the north-east monsoon a considerable quantity of rain falls. From the beginning of January to the end of May, the sky is gene-

rally clear, and the weather dry. Dews are not infrequent in January, and the early part of February; and in some years, light showers of rain occur during these months. The annual fall of rain is estimated at thirty-two inches; but in years when the monsoon fails, it does not amount to half that quantity. The mean temperature in the house, for one year, deduced from observations made at sun-rise, at two o'clock in the afternoon, and at sun-set, was in January $74\frac{1}{2}$, February $76\frac{1}{4}$, March 84, April $91\frac{1}{3}$, May 93, June 88, July 81, August $80\frac{1}{3}$, September 79, October 80, November $76\frac{1}{2}$, December $74\frac{1}{6}$, giving as the annual mean $81\frac{1}{2}$. Had these observations however been made earlier in the morning, and later in the evening, and the thermometer placed in a more exposed situation, it is probable that the *annual mean* would have been at least two or three degrees lower. Indeed, the *daily range*, which more especially affects health, is very considerable during November, December, January and February, amounting in the shade, generally to about 20°, and not infrequently to 30°.—The most sickly periods are the wet and cold seasons, when the mortality amongst Europeans chiefly occurs.

Military lines, and public buildings.

The cantonment extends in a direct line from east to west, nearly three miles in length, forming one long curved and irregular street, having the officer's houses ranged on either side, in moderate sized compounds; this street is intersected in different parts, by others running north and south, which afford a facility of communication with the bazaars, sepoys lines, and parade ground. The original lines face the north, and behind them is the bazaar, commencing on the right or east end, and extending three-fourths of the length of the cantonment. The bazaar, generally speaking, runs in a parallel line with the street, about two furlongs in its rear, having the sudr bazaar situated about the centre. On the right or east end of the whole line, stands the European infantry barracks, and somewhat in their front, to the north-east, is the burial ground

enclosed by a wall; the road from Madras and Masulipatam, running between the barracks and burial ground. A little to the west of the barracks is the hospital, a large and commodious quadrangular building, enclosed by a high wall; and further west, are the lines of the officers of the regiment. Southward, and at a right angle with the lines of the European regiment, are those of a native corps, added to the force in 1834; they are of a temporary structure, the ground on which they stand is high, intersected by ravines, and the surface very uneven.

Left of the European lines, follow progressively those of the four native regiments, and the officers houses extending to the western end of the cantonment; on the extreme right stands the church, a large and handsome building, situated on the highest spot of ground in the cantonment, and to the north-west of it, is the masonic lodge.

In front of the lines of the native corps, are the respective hospitals, places of arms, and quarters for the serjeants of the corps; and at about the centre of the whole of the line, is the arsenal; the front, of all of these buildings, being in a straight line about thirty feet in advance of the officers compounds, with a row of trees before them. About fifty paces farther in advance is a good road running from east to west,—or from the church to the lines of the horse brigade of artillery,—adjoining the parade ground, which is about half a mile in breadth.—The parade forms an inclined plane, descending about two inches in the yard, and is bounded to the north by a rivulet, having two small bridges across it, over which run the roads leading to the foot artillery lines, and to the cantonment of Bolarum. On the south side of the rivulet, due north of the arsenal, is the cantonment burial ground, in a low and swampy situation, surrounded by a fence of milk-hedge; on the northern side are first the public rooms, and near them the fives court, about a quarter of a mile to the north-east, the powder magazines, and half a mile north-west the

lines of the foot artillery. These lines are situated on higher ground than those of the infantry, and the original granite rocks, with which the whole country is covered, in a greater or less degree, have not been removed from around them; both lines run parallel, and are rather more than a mile asunder. On the right, of the artillery lines, are two hospitals—one for the gun lascars, and the other for the Europeans. About half a mile distant in the direction of Bowenpilly, are lines for a native corps, which was added to the force on the removal of the troops from Jaulnah in 1834; they are of a temporary structure; the ground on which they stand is elevated, and somewhat undulating, having some small tanks in the vicinity. The troop of horse artillery, are placed on the north-west end of the cantonment, from whence is a commanding view of the whole length of the parade ground, extending as far as the church. The barracks are on an elevated site, and separated from the lines of the native infantry by a narrow strip of low rice ground, through which a causeway has been made, there is also a small bridge leading to them, under which passes the little rivulet bounding the parade ground, before mentioned.

Hussain Saugor Tank.

South of the horse artillery lines, and at the south-western end of the cantonment, is the extensive sheet of water, called the "Hussain Saugor" tank, which formerly gave its name to the cantonment of Secunderabad; on the eastern side of this large tank, is the bund or bank, which runs due south leading to the Residency, and city of Hyderabad. The top of the bund forms an excellent road, wide enough for three carriages to pass abreast, and is about a mile and a half in length.

To the eastward of the tank is a tract of cultivated rice ground, extending about eight miles in length, to the river Moosey, near to the village of Oopal, on the Madras road.

Bowenpilly, Cavalry lines.

The Cavalry lines are distant about two miles north of the cantonment, at a place called

Bowenpilly, situated in an open country, and on dry, and somewhat elevated ground; and the regiments stationed there have generally been very healthy, and free from epidemic diseases, more particularly cholera.

Population of the Native town.

There are about 5000 houses in the Sudr bazaar, which at the average of six inhabitants to each, would give a population of 30,000; this is however under the estimate recently made out, which exhibits an aggregate population of* 34,357. The generality of the houses are of one story, built of mud and tiled, but in the main streets there are a considerable number of a better description, consisting of two stories, and pucka built. The streets are irregular, and deficient in breadth, and the ground is uneven and rocky, causing much difficulty in draining it effectually. The common sewers are generally covered in, and extend throughout the several streets of the bazaar, but from its unevenness, pools have formed in various directions, into which the sewers empty themselves, causing accumulations of filth, which at certain seasons of the year prove very offensive, and are productive of malaria, ; attention is however paid to the cleanliness of the bazaar, as far as practicable, the inhabitants being held responsible for sweeping in front of their houses, and being obliged to contribute towards the repair of the drains, in the streets in which they reside. Houses of the better description generally have privies attached to them, but there is a want of that essential, amongst the poorer classes, which renders certain localities exceedingly offensive. The cleanliness of the bazaar, and the convenience of its inhabitants, have been greatly promoted by the recent erection of a market, in an open and airy situation, where the butchers and sellers of vegetables are located; it has also had the effect of inducing persons to build in the neighbourhood, and of withdrawing a portion of the population from the more crowded districts

* Adult males....13,026
,, females ..13,145
Children..,..... 8186

Tosal...34,357

of the bazaar, affording facilities for widening the streets in those parts. The bazaar is well provided with water of good quality, from wells and bowries, fed by springs.

There are no returns kept of deaths among the population, and consequently no data exist to determine the average mortality. Fever, bowel complaints, and rheumatism, are the most common diseases, and are most prevalent at the close of the monsoon. Considering the extent of the population, there are but few paupers at this station, and a fund is provided by voluntary subscription among the gentry, for the relief of the indigent; and those who are able to work are seldom without employment.

The fund adverted to, is under the management of a committee, and mendicants are not allowed to prowl about, or frequent officers compounds.

Police. The Police force consists of a cutwal, 2 jemadars, 3 duffadars, and 61 peons, who are divided into night watches for the protection of property, &c. The establishment is paid from the revenue accruing from the Abkarry contract; but there is a separate establishment of a jemadar, and 27 peons, paid by the Nizam's government, specially employed in preventing the sale of illicit spirituous liquors. The Abkarry contractor is also required to support an establishment of 84 peons, for the prevention of smuggling.

A distinct building is appropriated as a jail; the mean average number of prisoners throughout the year, being about 28, which includes persons confined for debt, for petty offences, and criminal offenders under sentence by general court martial. Punishments for petty offences are awarded by the Superintendent of police, such as fines, imprisonment, with or without hard labour, and corporal punishment; but the latter is only had recourse to in aggravated cases, or where other means have proved ineffectual. Prisoners sentenced

to hard labour, are employed under the orders of the Superintendent of police, in draining and levelling the streets, and in repairing bridges and other public works. Prisoners for debt, are supported by the parties at whose instance they are confined, and criminal offenders are subsisted by Government, at the rate of four pice each per diem; all fines, which are regularly accounted for, are generally sufficient to cover the expenses of the maintenance of the prisoners.

Barrack & Hospital accommodation, for the European Infantry.

The barracks for the European infantry, at the eastern extremity of the cantonment, are situated on the side of a hill sloping gently to the eastward, with high land on three sides, and a low swampy plain on the fourth, the latter being interspersed with tanks, stagnant pools, rice fields, and a date plantation, which extends to within 500 yards of the barrack wall; and besides the intoxicating beverage it so abundantly produces, it serves also as a place of deposit for all the filth, and nuisances of the neighbourhood. On the north-west or opposite side, and distant 100 yards, is the burying ground, densely crowded with graves and tomb stones, and about half a mile further back is a high rugged ridge of granite rocks. The soil on which the barracks stand, consists of a reddish coloured clay, mixed with decomposed granite, and except the low cultivated ground above mentioned, the surface in the immediate vicinity, is dry and barren.

The dimensions of the several apartments in the barracks are as follows.

	Rooms. No.	Length Feet.	Breadth Feet.	Height Feet.	No. of Cots.	Total.
Wing.	1 Centre room.	210	18	18	76	76
	1 do.	229	18	18	84	84
	2 Verandah rooms each	196	12	18	34	68
	2 do.	215	12	12	58	208
Square.	4 Centre rooms	142	18	18	58	208
	4 do.	164	18	18	60	240
	4 Verandah rooms each	135	12	12	24	96
	4 do.	150	12	12	26	104
	32 Serjeants' rooms				2	24
					Total Cots	1016

Hospital.

The hospital is situated on higher ground, about 400 yards to the west of the barracks, and is a pucka building with a tiled roof, having enclosed verandahs round it; it is in the form of an oblong square, surrounded by a wall, and is divided into 4 centre, and 6 verandah wards, of the following dimensions.

	Length Feet.		Breadth Feet.	Height Feet.	No. of Cots.	Total.
For Males.	2 Long centre wards each	110	18	18	20	40
	2 Short do. do.	75	18	18	14	28
	2 Long Verandahs do.	248 and 180	12	12	0	36
	4 Short do. do. to to	107 and 75	12	12	0	28
For Females.	1 Ward do.	65	18	18	0	14
	4 Verandahs.		12	12	0	18
					Total Cots	164

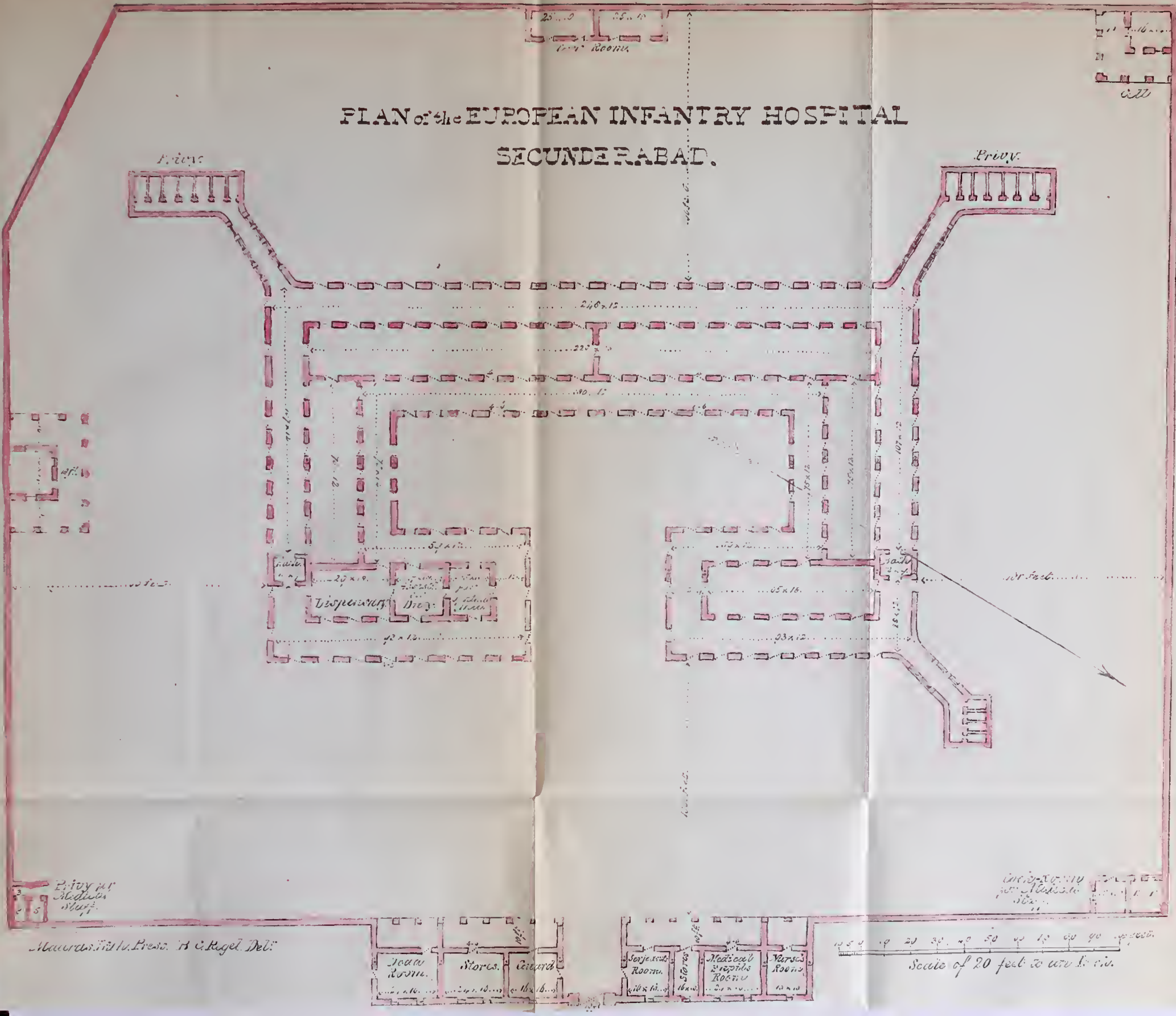
There are in addition to the above, an ophthalmic ward, two cells for maniacal patients, two bath rooms, a dispensary, a room for the medical officers on duty, a room for medical subordinates, for the serjeants, nurses, a guard room, store room and dead room, with cooking houses and privies. The wards are well ventilated, and the doors partly glazed, and partly venitianed.

European foot Artillery barracks.

The foot artillery barracks are situated on the elevated ridge, opposite the native infantry lines; they were built in 1826, and consist of two wings, each 280 feet long and 22 feet broad, having arched bombproof roofs, with a verandah on each side 11 feet broad. They form one long building, with an entrance in the centre, each side or wing of which, can accommodate a complete company.

The barracks are airy, though there are no ventilators in the roof, each wing being provided with 46 windows, and 6 doors; a plan of the building is annexed. In the barrack square, there are 10 quarters for the accommodation of the serjeants, each 16 feet by 10, with a small verandah in front.

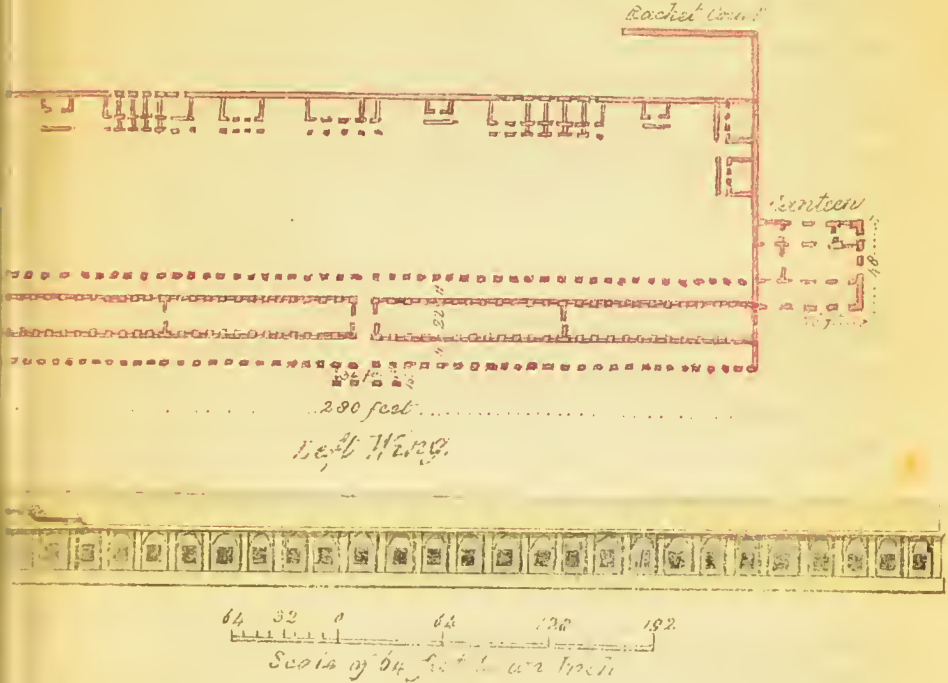
PLAN of the EUROPEAN INFANTRY HOSPITAL SECUNDERABAD.



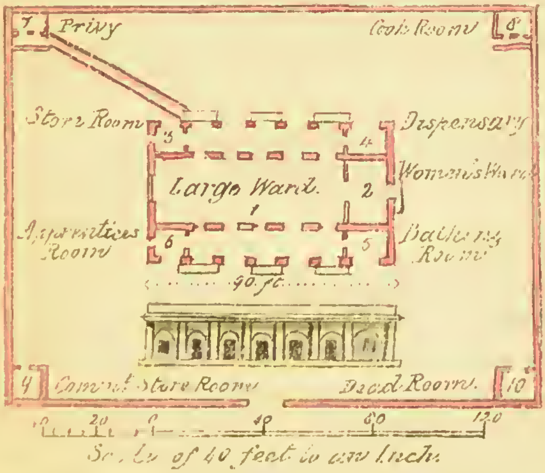
Madras Litho. Press. H. C. Rogel. Delt.

PLAN of the EUROPEAN FOOT ARTILLERY BARRACK, and HOSPITAL at SECUNDERABAD.

Barracks.



Hospital



Madras Lithographic Press by B.C. Regel.

The men are provided with iron cots on trestles; and of the three planks of which it consists, during the day one is fitted to a smaller set of trestles, to form a bench, the remaining two, serving as a table; each cot is 6¼ feet by 2½. Should the barrack be occupied by two complete companies, as intended, and supposing seven per cent to be married, each individual would have 690 cubic feet of air, making no deduction for children, at present however, there is only one company, and several men with families, are permitted to reside in the *parcherry*.

The yard or square, which has an open gutter through its centre, is too confined, the back wall being only 42 yards from the verandah of the barracks, and this space is considerably encroached on by the buildings for the serjeants, the guard, prison rooms, store, conjee house, cook rooms, and necessasaries.

There is a good well, outside the square at its western end, with a moat attached, worked by bullocks.

The privies are detached buildings, at the north-west corners of the square, and have one sewer emptying itself, into a shallow covered tank, about 80 yards from the building, it emits a constant stench during the hot months.

The prison room is very confined, being only 16 feet by 10, with one window.

There are two solitary cells, about half a mile to the northward of the barracks on a higher site, and are well adapted for the purpose.

Artillery Hospital. The European hospital is also a pucka, bomb-proof building, 90 feet long, by 50 broad, including back and front verandahs. It consists of one large ward, 72 feet long, by 18 broad, with a smaller one 15 feet long, and the same breadth, at one end, usually set apart for females; it has also four rooms, two at each end of the verandahs, measuring 13 feet long and 11 broad, one of which is occupied as a store room, a second as a dispensary, the third is a bathing room,

and the fourth is for the medical subordinates on duty. The building is surrounded by a wall 13 feet high, and 20 yards distant, and within the square, in the angles, are the cook-rooms—dead-room, commissariat store room, and the privy. This hospital was errected in 1828. See plan annexed.

Native Hospital. The hospital for the natives, distant 80 yards to the eastward, is a brick and chunam building, with a tiled roof, and is 50 feet long and 20 broad; it has a verandah on the north and south sides, 8 feet broad.

Tables of diseases from No. 1 to 10, with some remarks, will be found at the end of the report.

BOLARUM.

Bolarum, descrpition of. The cantonment of Bolarum is situated about 12 miles north of the city of Hyderabad, and about 5 north of Secunderbad, through which the road to it passes.

Though at so short a distance from Secunderabad, and but little more elevated, it has been remarkable, from its first occupation by the Nizam's troops, in the year 1815, for its greater salubrity, and exemption from the periodical visitations of fever, experienced in the neighbouring cantonment.

The granitic ridge on which the station stands, is 1890 feet above the level of the sea, and about 50 or 60 feet higher than Secunderabad. This ridge though of considerable extent, and forming an open plain on the higher and eastern side of the cantonment, of six or eight miles in circumference, is bounded on all sides by paddy fields, and there are several small tanks scattered about the vicinity. The gardens produce all kinds of European vegetables, some of them in great perfection, and besides the common Indian fruits, there are the finest sorts of mangoes, and also grapes, strawberries, and pine apples; a few peaches have been grown in some of the gardens, but of indifferent quality.

The range of the thermometer throughout the year may be stated at from 49°, to 90° in the shade, though in the hot

months it sometimes rises much higher. In June, July, August and September, the winds are westerly; during October, November, December, January and February, they blow from the east; and in March, April, and May, the north-westerly breezes are frequent.

The station has military lines for two battalions of infantry, a rissallah* of irregular horse, and 250 artillery.

The hospital is in an airy situation, and well raised, having every convenience for the accommodation of 150 sick, but there are seldom more than one third of that number under treatment.

The annual fall of rain may be taken at from 25 to 30 inches, which occurs principally in the south-west monsoon, or between June and October. In the north-east monsoon 4 or 5 inches have been known to fall during the month of December, but this is unusal and only happens occasionally.

With respect to salubrity, Bolarum may be considered amongst the most healthy stations in the Deccan, and invalids consequently resort to it for change of air, particularly from Secunderabad, and often with the most decided benefit. No rank vegetation is permitted to spring up within the limits of the cantonment, the hedge rows are cut down annually to a certain height, and the place is consequently open and in a great measure free from the sources of noxious exhaltaions, which besides being a nuisance, are the frequent causes of sickness at large military stations.

CANTONMENT OF JAULNAH.

General description of Jaulnah and its vicinity.

Jaulnah, is a considerable town and military station, in the province of Aurungabad, and is the capital of a district of the same name. The cantonment is situated in north latitude 19° 50″, and east longitude 76°; it is 263 miles, travelling distance, north-west from Secunderabad, and about the same from Bombay, and lies between the

* A body consisting of about 200 horse.

Nizam's military stations of Aurungabad and Hingolee, being 90 miles west of the latter, and 40 east of the former—the distance to the sea on the eastern coast in a direct line, is 210 miles.

Roads. The roads throughout the country, in the dry season, are tolerably good, but become nearly impassable in the rains, from being intersected by nullahs, and from the nature of the soft, black cotton ground, over which they run.

Hills and Jungle. The surrounding country is hilly, but not mountainous, and is intersected in all directions with numerous ravines; the hills are chiefly composed of trap rock, which in many places is in a state of decomposition, and above it, is found a layer of red gravel, of a lateritious character, mixed with lime; irregular hilly ranges, with extensive tracts of waste stony land covered with long grass, characterize the general aspect of the district; and its surface is singularly barren and dreary. The usual jungle met with is low and scattered, consisting chiefly of the babool, except near Soonar, 30 miles eastward of Jaulnah, where it is high and thick, and composed of a variety of trees. Jungle exhalations are considered most noxious in October and November.

Soil and Produce. The soil is of that description called cotton ground, interspersed here and there, with patches of red gravel—it is capable of the highest degree of cultivation, though often impregnated with saltpetre, which is collected in considerable quantities by some of the villagers, and large tracts of country are reserved for pasturage:—Quartz, carbonate of lime and detached pieces of silex of various tints, many of which are combined with copper and iron, are found in the ravines and nullahs, besides which a brownish ochre used by native painters, is also very common.

The principal grains and plants, cultivated in the neighbourhood, are rice, bajeery, jouary, chenna, oil plants and cotton. Both the large and small descriptions of plough, in use throughout the country, are here common, and are worked either by 2 or 4 bullocks, according to circumstances;

the ground is, first ploughed in one direction, and then across, and freed from weeds, when the seed is sown—and the harrow being passed once over, the operation is completed.

Irrigation from wells is chiefly resorted to for the cultivation of gardens, or for a few rice fields in the immediate vicinity of the water; wheat, and grain of all kinds being watered from tanks and nullahs.

Breed of Horses & Cattle.

In the neighbouring villages horses of a good description were formerly bred, and some of them were well adapted for the cavalry, but of late years the breed has become deteriorated; draft bullocks and buffaloes are also numerous, the neighbouring downs affording fine pasturage; and milk and butter are of an exceeding good quality; good working bullocks for carts, or carriages may be purchased for twenty rupees per pair; and excellent milch cows at from seven to ten rupees; but milch buffaloes bring about twenty rupees each. Great numbers of the latter, being esteemed a superior breed, are sent for sale to Hyderabad, Sholapore, Dharwar, Hoobly and many other large towns to the southward. Sheep and goats, are in abundance, the mutton being of a superior description and flavour; and butchers meat will generally bear a comparison with that in any part of southern India, and is moreover cheap. Poultry on the contrary is sold at high prices.

Climate and seasons.

The climate is considered to be one of the most plesant and salubrious in southern India; during the greater part of the year a fresh invigorating coolness is experienced in the mornings,—yet convalescence from serious attacks of disease, and more especially hepatic affections, is almost invariably slow and imperfect, and a change of air, especially to the sea coast, is generally found requisite for the restoration of health. The hot season includes March, April, May and June, and is decidedly the most healthy period of the year,—the heat in the middle of the day is intense, the thermometer ranging between 90° and 100°, but it becomes comparatively cool towards morning, the prevailing winds in these months are westerly.

The monsoon months embrace July, August, September and October,—but in September a partial cessation of the rains generally takes place. During September and October the exhalations from the soil, when partially dry, are regarded as deleterious,—and fever then becomes very prevalent. The average fall of rain is 32 inches.

November, December, January and February comprise the cold season, the variation of temperature at this time, is very great and sudden, the mornings are bitterly cold, and the days hot, the thermometer ranging between 40° and 80°, and ice has been known to form on plants. The winds at this season are northerly and easterly, and when due east are particularly cold and piercing. Fogs and dews prevail most in December and January, which are both very healthy months; and English vegetables then arrive at great perfection.

Town and Fort of Jaulnah, and Military Cantonment.

Old Jaulnah. The town of old Jaulnah contains a population of about 10,000 persons, of these about 2,000 are mussulmans, the rest are composed of different sects of hindoos, such as brahmins, rajpoots, gentoos and mahrattas. The town now in a great measure deserted, and in ruins, is of considerable extent ; but, from the superior construction of its small fort, situated on the bank of the Jaulnah river, and of the houses which are built many of them of hewn stone, it has evidently been a place of great opulence. An extensive trade was carried on here in grain and silks. which has now greatly declined, but a manufacture of silk cloths, for native use, is still kept up, which are chiefly exported to the upper Mahratta country. The reduction in the population, which was formerly much more numerous than at present, is attributed to the oppression and extortion of the native government.

Khaderabad. On the opposite side of the small river Koondulka, is the town of Khaderabad, which is surrounded by a high stone wall, and contains about 7000 inhabitants ; 1000 are mussulmans,and the remainder hindoos; marwarries among

the latter are a prominent class, who labour assiduously in their vocation, as soucars and shroffs. There was formerly an industrious race of parsees at this place, but they have much degenerated of late, and their numbers have now diminished to about 40.

A large and flourishing trade was carried on here; as well as in Jaulnah, about 25 or 30 years ago, in silk and cotton, which afforded employment to 4 or 5000 weavers, and beautiful fabrics of silk were manufactured, and sent to all parts of the country ; cotton cloths and muslins, of different textures, were also extensively made, and met with a ready market, but from various causes, such as the great influx and cheapness of English manufactures, the taxation of the Nizam's government, and the exaction and rapacity of the public servants, the trade has greatly declined, and the numbers of these industrious artizans, have now diminished to 3 or 400, who are principally employed in making saarees, pugries, kummurbunds, coarse muslins, and the coarser kinds of cotton cloths. The cotton raised in the neighbourhood is chiefly used for home consumption, and is of a superior quality.

A beautiful description of scarlet dye is prepared and sent to Bombay, where it is much prized for the brilliancy of its colour.

Wood is scarce and dear, teak-wood being in greatest estimation ; it is brought from the jungles of Nirmul and Massuck, and is used in building, and making furniture.

The streets in the towns of Jaulnah and Khaderabad are very narrow ; the houses are tiled, and those belonging to the wealthier natives, are often ornamented with figures representing subjects of hindoo mythology. Some consist of three or four stories, with a corresponding number of verandahs and balconies. The ground floor is sometimes made of stone work, overlaid with burnt brick, and chunam, and the houses generally, have a cleanly appearance.

Clothing. The pugry, ungrekah, and dhoputtah, are the description of clothing in use with the men, and in the cold

weather, a quilted ungrekah, cumbly, and mahratta shoes, are always worn;—the usual cholic, and saaree, constitute the dress of the female.

Charpoys are in very general use, and all classes endeavour to possess them. Firewood and charcoal are brought from a distance of 20 miles, the former with dried cow-dung, is used for cooking, and fires of charcoal are kept burning by the more wealthy natives, in the cold weather, in their apartments.

Use of opium. Opium is freely indulged in by the marwarries and mussulmans; and all castes and denominations give it to their children, till they are five or six years old, for the purpose of assuaging pain, and also to promote sleep, in order that their occupations may not be interfered with, by attendance on them. Opium is not however taken to excess by these people, and intoxication from the abuse, or too free indulgence in the drug, is rare.

State of Medicine. There is a strong dislike to European medicines and medical attendance; and even native doctors, are frequently not consulted, till disease has made great advances, but when once sent for, advice is invariably followed. In fever, purgatives, chereyta, and abstinence, are recommended; in inflammatory affections of the spleen, liver and intestines, as also in rheumatism, the actual cautery is applied, and borne with fortitude, and with the utmost belief in its good effects.

The poor are not numerous, and work can readily be obtained by all labourers desirous of employment. It is computed that a labouring man can support himself for about one rupee and a half monthly, the few coarse articles of raiment required, included. For some years back there has been but little sickness amongst the resident natives, and the chief disease seen is fever of the intermittent form. The visitations of cholera were formerly frequent and severe, and the consequent mortality very great, but of late years it has seldom appeared.

There are some aged inhabitants among the population, one in partieular, a mussulman, whose years amount to 95—there are others of different castes, whose ages vary from 80 to 90, and who although infirm, are still hale, and in the enjoyment of good health. Females are likewise long lived, and many mussulman as well as hindoo women, oetogenarians, may be seen.

Water. River water is always preferred by the natives when proeurable for eulinary purposes,—but although Jaulnah is abundantly supplied from wells, every garden possessing one, the water is seldom good, being highly impregnated with nitrate of potash. In the eantonment there are but two or three wells, the water of whieh is drinkable ;—but even in the driest seasons, there is no seareity.

Vegetable productions. Sugar-eane is raised in the neighbourhood in abundanee, but the eoarsest deseription of sugar only, and that known under the name of "jaggery" is manufactured, the finer sorts, being brought a eonsiderable distanee from the Berar eountry. Wheat and jowaree, are raised in great quantities ; the former when cheap is preferred to all other descriptions of grain, and during the harvest season, forty seers of the best quality ean be obtained for a rupee, and sixteen wheaten loaves of the best deseription, are also to be had for a rupee. Chenna is raised in large quantities, but the description of grain ealled "eooltie" is not in mueh estimation, and is but little eultivated, the former is proeurable during the harvest at from 60 or 65 seers per rupee.

European vegetable and fruits. The elimate of Jaulnah is admirably adapted for the purposes of hortieulture—most European vegetables are raised in great perfeetion; figs, grapes, peaehes, and strawberries, are all excellent in the season, the latter rival in size any met with in England, but are somewhat defieient in flavour; there is also a great variety and abundance of excellent European vegetables, such as peas, beans,

cabbage, knolkole, carrots, parsnips, turnips, celery, onions, potatoes and cauliflowers, as well as the more common country vegetables, of every description.

Cantonment

The cantonment* is situated on a gently sloping declivity, a small range of hills in front, from one to two miles distant, forming a sort of amphitheatre. The cavalry lines are on the south-east, those of the horse and foot artillery on the north-west, and the infantry in the centre. The town of Khaderabad lies within half a mile of old Jaulnah, and within two miles of the cantonment, in a south-westerly direction. The small river Koondulka, separates the towns of Khaderabad and Jaulnah, and forms the boundary of the cantonment.

The cantonment is capable of affording accommodation to one troop of European horse artillery, one regiment of native cavalry, and three regiments of native† infantry, having barracks, hospitals, store rooms, &c. for each; they were built in 1827, under the superintendence of an experienced Engineer.

Officers' houses.

The houses in the officers' lines, are well built, having spacious compounds with good gardens, out houses and stabling, attached to them. The range of hills in the neighbourhood, does not deserve the appellation of mountain land, their height above the neighbouring country, scarcely reaching 150 feet; they are flat, or tabular on their summit, a formation peculiar to this part of the Deccan; a few are detached, solitary and conical, and all are extremely bare of vegetation, having merely a few stunted bushes here and there. Their sides slope gently, and a precipitous ridge is seldom to be met with.

River Koondulka.

The river Koondulka has its rise near "Tuperan" and "Rajore," two small villages situated about 16 miles to the northward. In its course, it receives several tributary streams, and empties itself finally into

* See plan annexed.

† Two of the lines for native corps are at present unoccupied, and in a ruinous condition.

Madras Lithographic Press

D. C. Rige... Del.

PLAN of JAULNAH.

References.

a. Arsenal. b. Golundauze Lines. c. Horse Artillery Lines. d. Horse Artillery Barracks. e. Commissariat Godowns. f. Asylum for the Poor. g. Horse Artillery Followers. h.h.h.h.h. Hospitals. i. Parchery.

the Doodna, a branch of the Godavery, fifteen miles to the south-east. During the monsoon it comes down with great violence, and at this period, is in many places a hundred yards broad, but on the cessation of the rains, it soon subsides, and in the dry season diminishes to scarce one foot and a half in depth, and ten or twelve in breadth; it is generally fordable at all seasons. The river water is much esteemed by the natives for domestic purposes. Excellent fish is occasionally procured from deep pools left in its bed, on the subsidence of the monsoon.

Cavalry lines. The Cavalry lines are situated on the south-east end of the cantonment, on a gentle acclivity, the barracks or places for saddlery and arms, eight in number, facing to the north; the store rooms, gram godown, and standard yards, are on the opposite side, and lying parallel with them the horse lines; in the centre is the hospital at the extreme end of the barracks; within about a hundred yards, are the lines for sick horses, facing north and south. The officers houses are in rear of the barracks, and the sepoys huts 200 yards to the southward of these.

The hospital is capable of containing from 80 to 100 patients, it is flagged with rather a rough stone, has two doors in the centre, opposite each other, and at convenient distances are large windows fitted with shutters; the walls are about 12 feet high, and the roof double tiled; that is, flat tiles laid with chunnam, and the common tiles over them; the roof of the verandahs, is of chunam, about four inches thick, laid on flat tiles, they are also flagged with square stones, and on either end of them are two small apartments, the store room, and surgery.

The barracks and other public buildings, are of similar materials as the hospital.

The hospital is well rasied having a flight of several steps on either side, and the barracks are also elevated about a foot from the foundation. The horses of the regiment are watered

from a well in the lines, the water being raised by means of a bullock puccotta, and flowing into a large trough.

Infantry Hospital and lines. The hospital is airy, commodious, and capable of containing fifty bedsteads.

The sepoys huts are laid out in rear of the hospital, in regular streets, one for each company, and admit of a free circulation of air through them.

European Artillery barracks. The barracks of the horse artillery are unexceptionably situated, on the highest ground in the cantonment, between the lines of two infantry corps, (one of which is now unoccupied), the ground in front being open for several miles; a little to the right, and in front is the arsenal, the only building in advance of the lines. A branch of the river Koondulka, runs close to the left; and the barracks, serjeants quarters and store rooms, form the east and west sides of an oblong square, the north end of which is occupied by the cook rooms and godowns.

Hospital. The hospital is a good building, close to the barrack, 60 feet by 21, and holds twenty cots, the east verandah forms a surgery, and the western one is appropriated as a female ward.

Drainage. From the ground having a natural slope towards the river, the drainage in all parts of the contonment is good; the roads are easily kept in repair, and the locality is in every respect well chosen, and favourable to the health of the troops.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease. The general table No. 1, for European troops includes the sick of H. M.'s regiments, and the H. C.'s Foot Artillery at Secunderabad, and also a Company of Horse Artillery at Jaulnah; it shews the number of admissions into hospital, and the amount of mortality from the

most important diseases each half year, for the usual period of ten years, from 1829 to 1838. The annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength, are also given, as in the preceding reports, the average of these, as exhibited in the abstract table No. 2, being 217·230, 2·895, and 6·289 respectively.

The admissions were considerably above the average in 1833, 1834 and 1835, especially in 1834, the increase each year being almost wholly occasioned by fever; the ratio of mortality was nearly doubled in 1834 and 1837, in the latter year, the result exclusively of dysentery, and in the former, partly occasioned by hepatitis also.

During the ten years the total admissions have been 22,933, and the total deaths in hospital 664, from an aggregate strength of 10,557 men. The most prevalent diseases have been *fevers, dysentery, hepatitis, venereal affections, rheumatism, diarrhœa* and *thoracic diseases;* the mortality has chiefly resulted from *dysentery, hepatitis,* and *fever,* but particularly *dysentery, one half of the whole number of deaths, having been occasioned by that disease.*

Malarious dysentery of a low typhoid character, has prevailed to a great extent in the several European regiments, which have from time to time occupied the barracks at this station, since they were erected in 1804. The mortality from this disease, 335 deaths, shown in the abstract table No. 2, and which as already mentioned, includes the sickness and deaths amongst the Artillery at Secunderabad and Jaulnah, will be seen from the following tables to have occurred almost exclusively amongst H. M.'s troops at Secunderabad. The per centage of deaths to strength from dysentery alone, amongst the Royal troops is 4·047, while the per centage of deaths, from all diseases amongst the Artillery, is only 4·052.

JAULNAH.

No. 11.—*Table exhibiting the number of Admissions and Deaths amongst the European Horse Artillery at Jaulnah, from* 1829 *to* 1841, *exclusive of* 1831 *and* 1835.

CLASSES.	DISEASES.	Aggregate strength 1219. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and Deaths from each class of Disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	51	0	32	0								
	,, intermit quot.	162	0	335	1								
	,, tertiana......	78	0	185	0	411	2	639	3	1050	5	86 ·136	0 ·476
	,, remittens.....	97	1	63	0								
	,, com. cont.....	23	1	24	2								
	Cholera........	5	5	12	2	5	5	12	2	17	7	1 ·402	41 ·176
Diseases of the abdominal viscera......	Diarrhœa.......	59	0	99	0								
	Dysenteria acuta	56	2	101	7								
	,, chronica..	2	0	5	0								
	Obstipatio......	48	0	46	0								
	Dyspepsia.....	14	0	20	0	201	2	312	8	513	10	42 ·083	1 ·949
	Hœmorrhois...	22	0	37	0								
	Gastritis........	0	0	4	1								
	Hepatitis acuta	131	5	119	5								
	,, chronica	7	0	10	0	138	5	129	5	267	10	21 ·903	3 ·745
Diseases of the Lungs	Catarrhus......	29	0	16	0								
	Asthma.........	5	0	6	0	45	0	34	0	79	0	6 ·480	0 ·000
	Pneumonia.....	11	0	12	0								
Diseases of the Brain.	Apoplexia......	3	3	3	1								
	Epilepsia.......	5	0	1	0								
	Paralysis.......	1	0	3	0								
	Ebrietas........	4	0	9	0	13	3	22	3	35	6	2 ·871	17 ·142
	Delirium Tremens.........	0	0	6	2								
Eruptive fevers......	Variola.........	1	1	0	0								
	Varicella.......	2	0	0	0	3	1	0	0	3	1	0 ·246	33 ·333
	Ascites.........	0	0	3	0	0	0	3	0	3	0	0 ·246	0 ·000
Rheumatism......	Rheumatismus acutus..... ..	91	0	76	0	109	0	98	0	207	0	16 ·981	0 ·000
	,, chronicus.	18	0	22	0								
Venereal affections..	Syphilis primitiva..........	116	0	74	0								
	,, consecutiva..	1	0	4	0								
	Gonorrhœa.....	31	0	32	0								
	Hernia humoralis............	34	0	28	0	182	0	140	0	322	0	26 ·415	0 ·000
	Strictura urethræ..........	0	0	2	0								
	Scrophula......	0	0	1	0	0	0	1	0	1	0	0 ·082	0 ·000
	Morbi oculorum	20	0	40	0	20	0	40	0	60	0	4 ·922	0 ·000
	,, Cutis......	12	0	11	0	12	0	11	0	23	0	1 ·886	0 000
	Other diseases..	429	0	434	0	429	0	434	0	*863	0	70 ·795	0 ·000
	Total..	1568	18	1875	21	1568	18	1875	21	3443	39	282 ·444	1 ·132

* Of this number were Phlogosis.... 140. Ulcus 41.

Note.—Per centage of deaths to strength... 3·200

H. M.'s Regiments, and the H. C. Artillery at Secunderabad contrasted.

Table No. 12 and 13.	H. M.'s Regiments. *Aggregate Strength*, 7561. From 1829 to 1839 exclusive of 1833. Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.	H. C. Artillery. *Aggregate Strength*, 1382. From 1829 to 1840 inclusive. Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers........	4354	32	57·586	0·734	572	5	41·389	0·874
Cholera....................	75	28	0·991	37·333	6	3	0·434	50·000
Diarrhœa......	851	11	11·255	1·292	224	3	16·208	1·339
Dysenteria acuta............	2004	293	26·504	14·621	260	21	18·813	8·076
,, chronica........	96	13	1·269	13·541	2	0	0·144	0 000
Hepatitis acuta..............	1201	72	15·884	5·995	236	8	17·076	3·389
,, chronica...........	220	14	2·909	6·363	3	1	0·217	33·333
Catarrhus....................	277	2	3·663	0·722	27	1	1·953	3·703
Hœmoptysis.................	14	2	0·185	14·285	3	0	0·217	0·000
Asthma........'............	23	0	0·304	0·000	2	1	0·144	50·000
Phthisis pulmonalis.......	27	9	0·357	33·333	1	1	0·072	100·000
Pneumonia..................	185	5	2·416	2·702	15	0	1·085	0·000
Apoplexia....................	20	5	0·264	25·000	0	0	0	0
Epilepsia....................	58	2	0·767	3·448	6	1	0·434	16·666
Paralysis.....................	25	5	0·330	20·000	4	0	0·289	0·000
Amentia......................	11	1	0·145	9·090	0	0	0	0
Mania........................	6	1	0·079	16·666	3	1	0·217	33·333
Ebrietas......................	127	0	1·679	0·000	69	1	4·992	1·449
Delirium tremens............	188	3	2·486	1·595	59	1	4·269	1·694
Anasarca.....................	39	9	0·515	23·076	4	0	0·289	0·000
Ascites.......................	14	1	0·185	7·142	3	1	0·217	33·333
Rheumatismus acutus........	542	1	6·930	0·190	180	0	13·024	0·000
,, chronicus...........	206	3	2·724	1·456	0	0	0	0
Syphilis &c..................	1863	5	24·639	0·263	246	0	17·800	0·000
Morbi oculorum.............	473	1	6·255	0·211	30	0	2·170	0·000
,, cutis...............	82	0	1·084	0 000	11	0	0·795	0·000
Other diseases..............	3150	24	41 661	0·761	1028	7	74·381	0·680
Total....	16113	512	213·106	3·363	2991	56	216·642	1·870

Per centage of deaths to strength, 7·168.
Do. excluding cholera,....... 6·798.
H. M.'s Troops.

Per centage of deaths to strength, 4·052.
Do. excluding cholera,....... 3·835.
H. C. Troops.

Dysentery usually increases in severity and in extent, amongst the troops occupying the Infantry barracks, soon after the commencement of the monsoon, and Committees of Medical and Military officers have been appointed, at different times, to enquire into the probable exciting causes of the disease, but as yet without arriving at any satisfactory result.

Some of the best Medical authorities have attributed the disease to an endemial malarious condition of the atmosphere, occurring at a season when the vicissitudes of climate and the diurnal ranges of temperature are very great; whilst others have supposed it to be occasioned more, by the ill chosen situation and faulty construction of the barracks, than by climate.

In 1838, the barracks underwent a considerable alteration and improvment, the walls were raised, and ventilators made in the roof, additional doors opened, and verandahs erected all round, provided with venetians, and the drainage was also greatly improved. Subsequent to these alterations the barracks were occupied by the 1st Madras European regiment, and that corps suffered comparatively but little from dysentery; still it was *the most fatal disease* and from which 28 deaths, out of 65 in two years, (1840 and 1841) were occasioned. This regiment however it must be noticed, consisted of old acclimated soldiers, and arrived from Nagpore. H. M.'s 4th regiment, the next corps which occupied the barracks, on the contrary suffered as severely as any that preceded it; in 1843 this regiment buried 80 men from this disease, from an aggregate strength of 882 and in 1844 no fewer than 41 deaths from dysentery are recorded; thus shewing that the barracks alone, were not in fault.

The swampy ground on the south west, the range of rocky hills on the north east, intercepting the free current of air from that direction, and the more crowded condition of the Infantry barracks, have all probably contributed to produce

HYDERABAD SUBSIDIARY FORCE.

Table No. 1.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838.

Years.			Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1443	2	0	0	1	0	0	86	111	0	0	28	51	246	0	134	2	0	83	101	0	58	59	0	109	372	1223	218 ·806	1 ·569	3 ·434
		2d ,,	1233	0	0	0	5	0	0	86	124	0	0	32	55	149	0	116	1	0	44	85	0	79	30	0	108	319				
	Died.	1st half.	17	0	0	0	0	0	0	0	9	0	0	0	2	2	0	2	0	0	0	0	0	0	1	0	0	1				
		2d ,,	25	0	0	0	0	0	0	0	11	0	0	0	0	3	0	4	1	0	0	0	0	1	0	0	0	5				
1830	Admitted.	1st half.	1339	3	0	0	60	0	0	74	136	0	0	42	67	145	0	133	1	0	25	95	0	75	36	0	115	332	1210	193 ·966	2 ·513	4 ·876
		2d ,,	1008	2	0	0	2	0	0	47	103	0	0	31	27	130	0	109	0	0	44	83	0	63	15	0	101	251				
	Died.	1st half.	26	0	0	0	11	0	0	0	5	0	0	0	0	1	0	6	0	0	0	1	0	0	0	0	0	2				
		2d ,,	33	1	0	0	0	0	0	2	20	0	0	0	0	0	0	6	0	0	0	0	0	0	1	0	0	3				
1831	Admitted.	1st half.	1107	1	0	0	8	0	0	54	97	0	14	29	37	192	0	105	0	0	22	49	0	63	19	0	112	305	1181	184 ·674	1 ·971	3 ·640
		2d ,,	1074	2	0	0	10	0	0	121	66	0	2	39	23	125	0	68	0	0	69	57	0	71	18	0	88	315				
	Died.	1st half.	18	0	0	0	0	0	0	1	10	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	3				
		2d ,,	25	0	0	0	4	0	0	2	8	0	0	0	1	0	0	2	0	0	0	1	0	0	0	0	0	7				
1832	Admitted.	1st half.	993	1	0	0	5	0	0	62	33	0	9	25	19	121	0	72	0	0	30	57	0	62	31	0	154	312	1090	175 ·321	3 ·087	5 ·412
		2d ,,	918	0	0	0	34	0	7	68	96	0	5	46	24	76	0	61	0	0	25	34	0	76	18	0	115	233				
	Died.	1st half.	23	1	0	0	2	0	0	2	6	0	0	1	0	0	0	4	0	0	0	0	0	0	2	0	2	3				
		2d ,,	36	0	0	0	10	0	0	1	12	0	0	0	0	0	0	7	0	0	0	0	0	0	1	0	0	5				
1833	Admitted.	1st half.	1224	2	0	0	36	0	0	80	113	0	4	173	26	41	0	54	0	0	20	50	0	217	17	0	114	277	991	249 ·344	2 ·509	6 ·256
		2d ,,	1247	4	0	0	9	0	0	32	193	0	0	141	120	98	0	99	1	0	12	24	0	162	29	0	73	250				
	Died.	1st half.	20	1	0	0	5	0	0	0	5	0	0	1	0	2	0	0	0	0	0	1	0	1	1	0	0	3				
		2d ,,	42	3	0	0	2	0	0	1	13	0	0	1	1	6	0	6	1	0	0	0	0	0	2	0	2	4				
1834	Admitted.	1st half.	878	0	0	0	11	1	12	6	152	0	8	62	137	8	23	159	0	0	10	10	0	98	21	0	50	110	758	333 ·905	3 ·042	10 ·158
		2d ,,	1653	0	0	0	8	0	22	24	136	0	45	80	969	27	5	97	0	0	13	16	0	48	11	0	44	108				
	Died.	1st half.	33	0	0	0	3	0	0	0	13	0	0	0	1	1	0	12	0	0	0	0	0	0	0	0	0	3				
		2d ,,	44	0	0	0	1	0	1	1	15	0	0	1	6	3	0	11	0	0	0	0	0	0	1	0	0	4				
1835	Admitted.	1st half.	1244	0	0	0	7	9	26	47	80	0	26	107	444	3	6	99	0	0	7	43	0	64	31	1	96	148	884	260 ·972	2 ·557	6 ·674
		2d ,,	1063	0	0	0	9	0	44	59	167	0	54	68	190	8	3	94	0	0	9	40	0	74	17	0	69	158				
	Died.	1st half.	17	0	0	0	0	0	0	1	7	0	0	1	0	1	0	4	0	0	0	0	0	0	0	0	1	2				
		2d ,,	42	0	0	0	1	0	0	1	23	0	1	1	2	1	0	6	0	0	0	0	0	0	0	0	0	6				
1836	Admitted.	1st half.	844	5	0	0	3	6	35	64	59	0	21	36	37	6	0	62	2	0	12	62	0	113	37	0	72	212	1102	212 ·159	2 ·651	5 ·626
		2d ,,	1494	0	0	0	5	4	53	60	209	0	19	123	333	6	1	97	2	0	48	78	0	173	48	1	71	163				
	Died.	1st half.	12	1	0	0	0	0	1	1	4	0	0	0	1	1	0	1	0	0	0	0	0	0	1	0	0	1				
		2d ,,	50	0	0	0	0	0	0	0	32	0	0	2	5	0	0	8	1	0	1	0	0	0	0	0	0	1				
1837	Admitted.	1st half.	945	4	0	0	0	6	76	31	139	0	26	87	108	4	2	71	2	0	19	35	3	116	31	0	51	131	1124	196 ·797	6 ·238	12 ·277
		2d ,,	1212	2	0	0	10	8	30	47	320	0	9	91	191	5	2	99	0	0	20	42	0	104	36	0	43	153				
	Died.	1st half.	60	1	0	0	0	0	0	0	43	0	0	1	0	0	0	5	0	0	0	0	1	0	5	0	0	4				
		2d ,,	78	1	0	0	2	0	0	0	55	0	0	5	0	1	0	8	0	0	0	1	0	1	0	0	0	4				
1838	Admitted.	1st half.	988	2	0	0	1	3	20	22	133	0	13	60	103	3	0	72	0	0	17	46	0	229	45	0	83	136	991	202 ·615	3 ·128	6 ·338
		2d ,,	1026	0	0	0	10	4	5	86	196	0	11	79	160	0	0	82	0	0	11	34	0	167	13	0	47	121				
	Died.	1st half.	30	2	0	0	1	0	0	0	21	0	0	0	1	1	0	3	0	0	0	0	0	0	1	0	0	0				
		2d ,,	33	0	0	0	1	0	0	0	23	0	0	2	0	0	0	4	0	0	0	0	0	0	2	0	0	1				

HYDERABAD SUBSIDIARY FORCE.

Table No. 2.—Europeans—Abstract of the preceding Returns, shewing the Total number of Admissions, and Deaths, &c. from 1829 to 1838.

Diseases.

	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.
Aggregate strength. 10,557.											
1829 to 1838. Admitted. 1st half.	11,005	20	0	0	132	25	169	529	1053	0	121
1829 to 1838. Admitted. 2d ,,	11,928	10	0	0	102	16	161	630	1610	0	145
Total..	22,933	30	0	0	234	41	330	1159	2663	0	266
1829 to 1838. Died. 1st half.	256	6	0	0	22	0	1	5	123	0	0
1829 to 1838. Died. 2d ,,	408	5	0	0	21	0	1	8	212	0	1
Total..	664	11	0	0	43	0	2	13	335	0	1
Average per centage of sick to strength.	217·230	0·281	0	0	2·216	0·388	3·125	10·978	25·224	0	2·519
Do. of deaths to sick treated.	2·895	36·666	0	0	18·376	0	0·606	1·121	12·579	0	0·375
Do. of deaths to strength.	6·289	0·104	0	0	0·407	0	0·018	0·123	3·173	0	0·009

	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries.	Other Complaints.
Aggregate strength. 10,557.															
1829 to 1838. Admitted. 1st half.	649	1029	769	31	961	7	0	245	548	3	1095	327	1	956	2335
1829 to 1838. Admitted. 2d ,,	730	2092	624	11	922	4	0	295	493	0	1017	235	1	759	2071
Total..	1379	3121	1393	42	1883	11	0	540	1041	3	2112	562	2	1715	4406
1829 to 1838. Died. 1st half.	4	5	12	0	38	0	0	0	2	1	1	11	0	3	22
1829 to 1838. Died. 2d ,,	12	15	14	0	62	3	0	1	2	0	2	7	0	2	40
Total..	16	20	26	0	100	3	0	1	4	1	3	18	0	5	62
Average per centage of sick to strength.	13·062	29·563	13·195	0·397	17·836	0·104	0	5·115	9·867	0·028	20·005	5·323	0·018	16·245	41·735
Do. of deaths to sick treated.	1·160	0·640	1·866	0	5·310	27·272	0	0·185	0·384	33·333	0·142	3·202	0	0·291	1·407
Do. of deaths to strength.	0·157	0·189	0·246	0	0·947	0·028	0	0·009	0·037	0·009	0·028	0·170	0	0·047	0·567

HYDERABAD SUBSIDIARY FORCE.

Table No. 3.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	" continued.	" intermittent.	" remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
			Diseases.																													
1829	Admitted.	1st half.	2489	1	0	0	4	0	0	55	26	0	0	15	510	126	0	2	2	0	53	254	0	139	10	0	355	907	9880	43 ·265	1 ·758	0 ·750
		2d "	1777	0	0	0	14	0	0	49	18	0	0	2	408	88	0	7	9	0	58	149	0	107	15	0	262	591				
	Died.	1st half.	38	0	0	0	0	0	0	1	2	0	0	1	8	10	0	0	0	0	0	1	0	1	1	0	0	13				
		2d "	37	0	0	0	4	0	0	2	1	0	0	0	4	5	0	1	1	0	0	1	0	1	0	0	2	15				
1830	Admitted.	1st half.	2018	0	0	0	62	0	0	59	11	0	0	13	349	71	0	5	14	0	34	134	0	84	14	0	258	910	9036	40 ·382	2 ·630	1 ·062
		2d "	1631	2	0	0	10	0	0	42	16	0	57	3	352	79	0	6	8	0	39	157	0	66	6	0	225	563				
	Died.	1st half.	69	0	0	0	36	0	0	0	1	0	0	2	3	2	0	1	0	0	0	4	0	1	2	0	3	14				
		2d "	27	2	0	0	3	0	0	3	1	0	0	1	1	1	0	0	0	0	0	3	0	0	2	0	0	10				
1831	Admitted.	1st half.	1479	1	0	0	60	0	0	31	5	0	99	6	138	38	0	2	8	0	44	132	0	58	1	0	235	621	8694	38 ·957	2 ·569	1 ·000
		2d "	1908	0	0	0	19	0	0	97	15	0	147	7	366	216	0	3	2	0	53	134	0	55	1	0	229	564				
	Died.	1st half.	49	1	0	0	29	0	0	1	2	0	1	0	3	0	0	0	0	0	0	2	0	0	1	0	0	9				
		2d "	38	0	0	0	11	0	0	4	1	0	1	1	3	2	0	0	0	0	0	2	0	1	0	0	1	11				
1832	Admitted.	1st half.	1947	0	0	0	10	0	0	31	26	0	255	10	193	167	0	6	4	0	44	172	0	60	2	0	264	703	8656	41 ·277	3 ·610	1 ·490
		2d "	1626	3	0	0	95	0	0	27	14	0	209	6	272	34	0	4	5	0	57	152	0	28	6	0	186	528				
	Died.	1st half.	41	0	0	0	7	0	0	1	2	0	0	4	6	2	0	1	0	0	0	3	0	0	0	0	1	14				
		2d "	88	2	0	0	53	0	0	2	1	0	0	1	5	2	0	0	0	0	0	2	0	1	0	0	1	18				
1833	Admitted.	1st half.	1951	1	0	0	93	0	0	23	11	0	180	5	319	105	0	2	4	0	33	155	0	37	6	0	196	781	8052	55 ·104	3 ·718	2 ·049
		2d "	2486	2	0	0	49	0	0	46	41	0	361	23	647	261	0	1	3	0	76	177	0	39	1	0	176	583				
	Died.	1st half.	88	1	0	0	43	0	0	2	0	0	0	2	7	1	0	1	0	0	0	1	0	0	1	0	2	27				
		2d "	77	1	0	0	20	0	0	1	6	0	0	0	11	4	0	1	0	0	0	4	0	2	0	0	1	26				
1834	Admitted.	1st half.	1712	0	10	8	1	16	1	32	13	0	218	4	774	153	8	3	0	0	27	73	0	59	15	0	121	176	5425	114 ·193	2 ·405	2 ·746
		2d "	4649	1	2	5	1	73	2	51	79	2	288	9	3255	148	11	1	4	0	23	167	0	57	31	0	217	222				
	Died.	1st half.	24	0	0	1	0	0	0	3	1	0	0	0	8	3	0	0	0	0	0	0	0	0	2	0	2	4				
		2d "	125	1	2	2	0	0	0	5	21	0	2	9	57	8	0	0	0	0	0	4	0	2	5	0	1	6				
1835	Admitted.	1st half.	3719	0	1	5	1	61	1	64	49	0	636	91	1653	65	36	3	11	0	40	228	0	74	15	0	233	452	7980	84 ·348	1 ·678	1 ·416
		2d "	3012	1	4	2	1	164	1	62	53	0	290	128	1277	23	9	1	5	0	36	186	0	60	58	0	115	536				
	Died.	1st half.	55	0	1	1	0	0	0	3	7	0	4	4	16	2	0	0	0	0	0	2	0	0	4	0	2	9				
		2d "	58	1	1	0	0	0	0	2	10	0	3	8	14	1	0	0	0	0	0	3	0	0	6	0	2	7				
1836	Admitted.	1st half.	2104	5	0	4	2	99	0	50	27	0	184	60	682	24	37	2	4	0	16	178	0	55	19	0	261	395	7885	58 ·922	1 ·894	1 ·116
		2d "	2542	0	2	0	0	72	1	62	46	0	180	97	1119	11	11	5	3	0	40	142	0	49	25	0	272	405				
	Died.	1st half.	47	0	0	0	0	0	0	5	4	0	0	1	13	2	0	0	0	0	0	4	0	2	6	0	0	10				
		2d "	41	0	1	0	0	0	1	6	5	0	0	3	7	0	0	0	0	0	0	0	0	0	2	0	4	12				
1837	Admitted.	1st half.	1777	1	0	0	87	59	5	47	19	0	60	44	420	24	45	2	1	0	32	155	11	51	26	0	265	423	7829	45 ·612	3 ·388	1 ·545
		2d "	1794	0	1	3	72	69	1	75	23	0	126	96	558	31	14	5	2	0	50	130	4	50	15	0	206	263				
	Died.	1st half.	62	0	0	0	40	0	0	1	2	0	0	1	3	2	0	0	0	0	0	3	0	0	4	0	2	4				
		2d "	59	0	0	0	34	1	0	1	0	0	0	1	7	3	0	1	0	0	0	1	1	0	5	0	0	4				
1838	Admitted.	1st half.	2187	1	3	4	9	59	0	101	44	0	202	47	634	29	17	3	4	0	26	204	13	67	17	0	228	445	7625	76 ·813	3 ·141	2 ·413
		2d "	3670	1	28	0	216	73	1	219	76	0	464	42	1520	51	19	7	5	0	50	193	0	54	19	0	264	368				
	Died.	1st half.	33	1	2	1	3	0	0	5	3	0	0	0	5	1	0	0	0	0	0	2	1	0	5	0	0	4				
		2d "	151	1	8	0	94	0	0	4	8	0	2	1	13	3	0	0	1	0	0	3	0	0	1	0	0	12				

HYDERABAD SUBSIDIARY FORCE.

Table No. 4.—Natives—Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

		Diseases.																										
Aggegate strength. 81.042	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
1829 to 1838. Admitted. 1st half.	21383	10	14	21	329	294	7	493	231	0	1834	295	5702	802	143	30	52	0	349	1685	24	684	155	0	2416	5813
2d ,,	25095	10	37	10	477	451	6	730	381	2	2122	413	9774	942	64	40	46	0	482	1587	4	565	177	0	2152	4623
Total..	46478	20	51	31	806	745	13	1223	612	2	3956	708	15476	1744	207	70	98	0	831	3272	28	1249	332	0	4568	10·436
Died...... 1st half.	506	3	3	3	158	0	0	22	24	0	5	15	72	25	0	3	0	0	0	22	1	4	26	0	12	108
2d ,,	701	8	12	2	219	1	1	30	54	0	8	25	122	29	0	3	2	0	0	23	1	7	21	0	12	121
Total..	1207	11	15	5	377	1	1	52	78	0	13	40	194	54	0	6	2	0	0	45	2	11	47	0	24	229
Average per centage of sick to strength.	57 ·351	0·024	0·062	0·038	0·994	0·919	0·016	1·509	0·755	0·002	4·881	0·873	19·096	2·151	0·255	0·086	0·120	0	1·025	4·037	0·034	1·541	0·409	0	5·636	12·877
Do. of deaths to sick treated.	2 ·596	55·000	29·411	16·129	46·774	0·134	7·692	4·251	12·745	0	0·328	5·649	1·253	3·096	0	8·571	2·040	0	0	1·375	7·142	0·880	14·156	0	0·525	2·194
Do. of deaths to strength.	1 ·489	0·013	0·018	0·006	0·465	0·001	0·001	0·064	0·096	0	0·016	0·049	0·239	0·066	0	0·007	0·002	0	0	0·055	0·002	0·013	0·057	0	0·029	0·282

HYDERABAD SUBSIDIARY FORCE.

No. 5.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

EUROPEAN TROOPS.

Classes.	Diseases.	From 1834 to 1838. Aggregate strength 4862. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	94	0	138	1	1299	10	2469	30	3768	40	77 ·498	1 ·061
	,, intermit quot.	648	2	1369	11								
	,, tertiana......	181	1	475	2								
	,, remittens.....	24	4	46	5								
	,, continua......	352	3	441	11								
	Cholera	22	4	42	4	22	4	42	4	64	8	1 ·316	12 ·500
Diseases of the abdominal viscera.......	Dysenteria acuta	517	79	999	143	563	87	1028	148	1591	235	32 ·723	14 ·770
	,, chronica......	46	8	29	5								
	Diarrhœa........	173	2	276	3	409	3	528	8	937	11	19 ·271	1 ·173
	Colica..........	34	0	37	0								
	Obstipatio.......	36	0	49	0								
	Hœmorrhois....	56	0	70	1								
	Enteritis........	12	0	5	0								
	Peritonitis......	0	0	0	0								
	Gastritis........	7	1	6	1								
	Dyspepsia......	91	0	85	3								
	Hepatitis acuta.	395	18	404	27	463	25	469	37	932	62	19 ·169	6 ·652
	,, chronica......	68	7	65	10								
Diseases of the Lungs and Heart	Catarrhus	79	0	53	0	165	7	125	3	290	10	5 ·964	3 ·448
	Asthma	5	0	6	0								
	Phthisis pulmonalis..........	6	5	11	1								
	Hœmoptysis.....	6	1	8	0								
	Pleuritis.........	0	0	0	0								
	Pneumonia......	66	1	42	2								
	Carditis	1	0	2	0								
	Palpitatio	1	0	1	0								
	Dyspnœa.......	1	0	2	0								
Diseases of the Brain.	Apoplexia......	11	4	2	1	269	8	233	5	502	13	10 ·324	2 ·589
	Epilepsia.......	14	2	9	0								
	Paralysis.......	2	1	11	2								
	Cephalalgia	69	0	55	0								
	Phrenitis........	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	4	0	0	0								
	Mania..........	0	0	2	1								
	Hydrophobia...	0	0	0	0								
	Delirium Tremens.........	103	1	61	1								
	Ebrietas.........	66	0	93	0								
Diseases of the Eye..	Morbi oculorum..........	65	0	101	1	65	0	101	1	166	1	3 ·414	0 ·602
Do. ,, Skin	,, cutis........	25	0	22	0	25	0	22	0	47	0	0 ·966	0
Eruptive Fevers......	Variola.........	3	1	0	0	10	1	8	0	18	1	0 ·370	5 ·555
	Varicella........	0	0	0	0								
	Rubeola........	4	0	0	0								
	Scarlatina	0	0	0	0								
	Erysipelas.......	3	0	8	0								
Dropsies....	Anasarca.......	16	2	10	4	23	5	19	5	42	10	0 ·863	23 ·809
	Ascites.........	7	3	9	1								
	Hydrothorax....	0	0	0	0								
Rheumatic affections.	Rheumatismus acutus........	133	0	143	0	197	0	214	1	411	1	8 ·453	0 ·243
	,, chronicus....	63	0	67	1								
	Neuralgia......	0	0	0	0								
	Odontalgia......	1	0	4	0								
Venereal affections..	Syphilis primitiva..........	313	0	255	1	620	0	566	1	1186	1	24 ·393	0 ·084
	,, consecutiva...	47	0	34	0								
	Gonorrhœa.....	203	0	221	0								
	Hernia humoralis..........	50	0	44	0								
	Strictura urethræ..........	7	0	9	0								
Specific diseases.....	Atrophia........	2	0	0	0	47	0	21	0	68	0	1 ·398	0
	Beriberi.........	0	0	0	0								
	Elephantiasis...	0	0	0	0								
	Lepra..	0	0	0	0								
	Dracunculus....	34	0	11	0								
	Ulcus phagedenicum........	3	0	1	0								
	Scrophula......	7	0	6	0								
	Scorbutus......	1	0	3	0								
Punishment.	Punitus........	13	0	20	0	13	0	20	0	33	0	0 ·678	0
Wounds and injuries...	Fractura........	8	0	14	0	352	1	274	0	626	1	12 ·875	0 ·159
	Luxatio.........	4	0	4	0								
	Subluxatio......	48	0	43	0								
	Vulnus sclopitorum........	3	1	3	0								
	,, incisum......	47	0	35	0								
	Contusio	230	0	165	0								
	Ambustio	12	0	10	0								
Other diseases, including Phlogosis, Ulcus, &c............		357	1	309	4	357	1	309	4	*666	†5	13 ·698	0 ·750
	Total.......	4899	152	6448	247	4899	152	6448	247	11347	399	233 ·381	3 ·561

Average per centage of deaths to strength during these five years, has been 8·206.

* Of this number were

Phlogosis..............	243	1
Do. Do. Ulcus.........	134	0
Do. Do. Bubo simplex.	88	0
Total.......	465	1

† The deaths under this head, include besides those accounted for in the preceding note, two from splenitis, (under which head 62 admissions have taken place) one from cachexia, and one from hydarthrus.

HYDERABAD SUBSIDIARY FORCE.

No. 6.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 36.744				Admissions and deaths from each class of disease.				Totaladmissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of [illegible]
		1st Half.		2d. Half.		1st Half.		2d. Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers......	Febrisephemera	1300	4	1348	7								
	,, intermit.quot.	3464	43	6792	90								
	,, tertiana......	699	3	937	8	6004	66	9713	142	15717	208	42 ·774	1 ·[illegible]
	,, remittens.....	295	10	264	15								
	,, continua.....	246	6	372	22								
	Cholera........	100	43	290	128	100	43	290	128	390	171	1 ·061	43 ·86
Diseases of the Abdominal Viscera......	Dysenteriaacuta	121	11	210	36								
	,, chronica......	23	6	67	8	144	17	277	44	421	61	1 ·145	14 ·49
	Diarrhœa.......	294	16	469	18								
	Colica..........	80	0	46	0								
	Obstipatio......	46	2	60	3								
	Hœmorrhois....	18	0	20	0								
	Enteritis.......	1	0	3	0	549	20	711	30	1260	50	3 ·429	3 ·9[illegible]
	Peritonitis.....	0	0	1	1								
	Gastritis.......	4	1	3	0								
	Dyspepsia......	106	1	109	8								
	Hepatitis acuta.	12	0	17	1								
	,, chronica......	1	0	2	0	13	0	19	1	32	1	0 ·078	3 ·12
Diseases of the Lungs and Heart	Catarrhus......	73	4	70	5								
	Asthma........	16	6	44	1								
	Phthisis pulmonalis.........	7	4	9	5								
	Hœmoptysis....	3	1	1	0								
	Pleuritis........	0	0	0	0	125	21	148	19	273	40	0 ·742	14 ·6[illegible]
	Pneumonia.....	21	5	15	5								
	Carditis........	0	0	1	0								
	Palpitatio......	0	0	3	1								
	Dyspnœa.......	5	1	5	2								
Diseases of the Brain.	Apoplexia......	1	1	3	3								
	Epilepsia.......	6	2	17	2								
	Paralysis.......	8	1	13	1								
	Cephalalgia	41	2	30	0								
	Phrenitis.......	0	0	0	0								
	Ictus solis.....	0	0	0	0								
	Amentia........	4	0	1	1	84	7	87	9	171	16	0 ·462	9 ·35[illegible]
	Mania..........	16	0	16	0								
	Hydrophobia ..	1	1	1	1								
	Delirium Tremens.........	7	0	6	1								
	Ehrietas........	0	0	0	0								
Diseases of the Eye..	Morbi oculorum	141	0	199	0	141	0	199	0	340	0	0 ·925	[illegible]
Do. Skin.	,, cutis......	294	0	451	1	294	0	451	1	745	1	2 ·027	0 ·134
Eruptive fevers......	Variola.........	24	1	4	1								
	Varicella.......	156	0	33	0								
	Ruheola........	16	0	0	0	200	2	40	1	240	3	0 ·653	1 ·25[illegible]
	Scarlatina......	0	0	0	0								
	Erysipelas......	4	1	3	0								
Dropsies....	Anasarca........	29	4	53	9								
	Ascites.........	5	3	4	4	36	8	58	13	94	21	0 ·255	22 ·340
	Hydrothorax...	2	1	1	0								
Rheumatic affections.	Rheumat acutus	345	4	340	3								
	,, chronicus....	493	7	477	8	863	11	829	11	1692	22	4 ·604	1 ·300
	Neuralgia.......	0	0	0	0								
	Odontalgia... ..	25	0	12	0								
Venereal affections..	Syphilis primitiva..........	146	0	104	1								
	,, consecutiva	13	1	16	0								
	Gonorrhœa.....	63	0	60	1	306	2	267	2	573	4	1 ·559	0 ·698
	Hernia humoralis...........	80	0	84	0								
	Strictura urethræ..........	4	1	3	0								
Specific diseases.....	Atrophia.......	20	3	35	10								
	Beriberi........	21	3	10	2								
	Elephantiasis...	0	0	2	0								
	Lepra..........	0	0	0	0								
	Dracunculus....	143	0	64	0	194	7	121	12	315	19	0 ·857	6 ·031
	Ulcus phagedenicum........	0	0	0	0								
	Scrophula......	10	1	10	0								
	Scorbutus......	0	0	0	0								
Punishment	Punitus.........	18	0	7	0	18	0	7	0	25	0	0 ·068	0
Wounds and injuries ..	Fractura........	22	0	39	0								
	Luxatio	5	0	4	0								
	Subluxatio.....	61	0	71	0								
	Vulnus sclopitorum..........	6	2	4	1	1107	6	1116	8	2223	14	6 ·049	0 ·629
	,, incisum......	141	2	118	3								
	Contusio........	850	2	853	4								
	Ambustio.......	22	0	27	0								
Other diseases, including Phlogosis, Ulcus, &c............		1321	11	1334	13	1321	11	1334	13	*2655	+24	7 ·225	0 ·903
	Total....	11499	221	15667	434	11499	221	15667	434	27166	655	73 ·933	2 ·411

Average per centage of deaths to strength during these five years, has been 1·782.

* Of this number were

Phlogosis............	1390	2
Do. Do. Ulcus.......	811	4
Do. Do. Bubo simplex.	138	0
Total......	2339	6

+ The deaths under this head include, besides those accounted for in the preceding note, one from arthritis, one from diabetes, one from dysuria, one from enuresis, one from epistaxis, one from fistula, in ano, one from hæmatemesis, one from icterus, one from scirrhus, three from splenitis, and two from tetanus, the remaining four have not been particularized.

SECUNDERABAD SUBSIDIARY FORCE.

No. 7.—*Table exhibiting the admissions and deaths from the most particular diseases, amongst the European and Native Troops, at Secunderabad and Jaulnah, during the ten years, from* 1829 *to* 1838 *inclusive, with the proportion each bears to the total number of Admissions and Deaths.*

	Cholera.		Fevers.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these compts.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Europeans.																		
Total Admissions....22,933	234	$\frac{1}{98}$	6159	$\frac{2}{7}$	2663	$\frac{2}{17}$	1883	$\frac{1}{12}$	1159	$\frac{1}{20}$	562	$\frac{1}{41}$	1041	$\frac{1}{22}$	2112	$\frac{1}{11}$	15813	$\frac{2}{3}$
„ Deaths.......... 664	43	$\frac{1}{15}$	63	$\frac{2}{21}$	335	$\frac{1}{2}$	100	$\frac{2}{13}$	13	$\frac{1}{51}$	18	$\frac{1}{37}$	4	$\frac{1}{166}$	3	$\frac{1}{221}$	579	$\frac{8}{9}$
Natives.																		
Total Admissions....46,478	806	$\frac{1}{57}$	21884	$\frac{1}{2}$	612	$\frac{2}{151}$	70	$\frac{2}{1323}$	1223	$\frac{1}{38}$	332	$\frac{1}{139}$	3272	$\frac{1}{14}$	1249	$\frac{1}{37}$	29448	$\frac{2}{3}$
„ Deaths.........1,207	377	$\frac{1}{3}$	301	$\frac{1}{4}$	78	$\frac{2}{31}$	6	$\frac{1}{201}$	52	$\frac{1}{23}$	47	$\frac{1}{26}$	45	$\frac{1}{27}$	11	$\frac{1}{110}$	917	$\frac{4}{5}$

No. 8.—*The following Table shews the per centage of admissions from the same diseases to the strength, of deaths to sick treated, and of deaths to the strength; it exhibits also the difference in these respects, amongst the European and Native sick.*

	Cholera.		Fevers.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.		Grand total.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 10,557.																				
Percentage of sick to strength	234	2·216	6159	58·340	2663	25·224	1883	17·836	1159	10·978	562	5·323	1041	9·867	2112	20·005	15813	149·786	22933	217·230
„ of deaths to sick treated.	43	18·376	63	1·022	335	12·579	100	5·310	13	1·121	18	3·202	4	0·384	3	0·142	579	3·661	664	2·895
„ of deaths to strength...	43	0·407	63	0·596	335	3·173	100	0·947	13	0·123	18	0·170	4	0·037	3	0·028	579	5·484	664	6·289
Native Troops. STRENGTH, 81,042.																				
Percentage of sick to strength	806	0·994	21884	27·002	612	0·755	70	0·086	1223	1·509	332	0·409	3272	4·037	1249	1·541	29448	36·336	46478	57·351
„ of deaths to sick treated.	377	46·774	301	1·375	78	12·745	6	8·571	52	4·251	47	14·156	45	1·375	11	0·880	917	3·103	1207	2·596
„ of deaths to strength...	377	0·465	301	0·371	78	0·096	6	0·007	52	0·064	47	0·057	45	0·055	11	0·013	917	1·131	1207	1·489

No. 9.—*Table shewing the amount of Admissions and Deaths from the principal classes of disease for the period of five years, from 1834 to 1838 inclusive, with the proportion of Admissions from each to the total of sick treated, and of deaths to the total mortality.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																				
Total Admissions.....11347	3768	$\frac{1}{3}$	64	$\frac{1}{178}$	1591	$\frac{1}{7}$	937	$\frac{1}{12}$	932	$\frac{1}{12}$	290	$\frac{1}{39}$	502	$\frac{1}{23}$	42	$\frac{1}{271}$	411	$\frac{1}{28}$	1186	$\frac{1}{10}$
„ Deaths........ 399	40	$\frac{1}{10}$	8	$\frac{1}{50}$	235	$\frac{4}{7}$	11	$\frac{1}{36}$	62	$\frac{1}{6}$	10	$\frac{1}{40}$	13	$\frac{1}{31}$	10	$\frac{1}{40}$	1	$\frac{1}{399}$	1	$\frac{1}{399}$
Native Troops.																				
Total Admissions ...27,166	15717	$\frac{1}{2}$	390	$\frac{1}{69}$	421	$\frac{1}{64}$	1260	$\frac{2}{43}$	32	$\frac{1}{844}$	273	$\frac{1}{99}$	171	$\frac{1}{157}$	94	$\frac{1}{287}$	1692	$\frac{1}{16}$	573	$\frac{1}{47}$
„ Deaths........ 655	208	$\frac{1}{3}$	171	$\frac{1}{4}$	61	$\frac{4}{43}$	50	$\frac{1}{12}$	1	$\frac{1}{655}$	40	$\frac{1}{16}$	16	$\frac{1}{41}$	21	$\frac{1}{31}$	22	$\frac{1}{30}$	4	$\frac{1}{164}$

No. 10.—*Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 4862.																				
Per centage of sick to strength	3768	77·498	64	1·316	1591	32·723	937	19·271	932	19·169	290	5·964	502	10·324	42	0·863	411	8·453	1186	24·393
„ of deaths to sick.....	40	1·061	8	12·500	235	14·770	11	1·173	62	6·652	10	3·448	13	2·589	10	23·809	1	0·243	1	0·084
„ of deaths to strength..	40	0·822	8	0·164	235	4·833	11	0·226	62	1·275	10	0·205	13	0·267	10	0·205	1	0·020	1	0·020
Native Troops. STRENGTH, 36,744.																				
Per centage of sick to strength	15717	42·774	390	1·061	421	1·145	1260	3·429	32	0·087	273	0·742	171	0·462	94	0·255	1692	4·604	573	1·559
„ of deaths to sick.....	208	1·323	171	43·846	61	14·489	50	3·968	1	3·125	40	14·652	16	9·356	21	22·340	22	1·300	4	0·698
„ of deaths to strength..	208	0·566	171	0·465	61	0·166	50	0·136	1	0·002	40	0·108	16	0·043	21	0·057	22	0·059	4	0·010

the baneful results, and appear to justify the situation being altogether abandoned.

With respect to the comparative immunity from dysentery experieneed by the artillery, there scems to be little doubt that the more open and elevated position on which their barracks stand, and the superior construetion of them, contribute mueh to preserve the men in health ; although these circumstances, are perhaps not adequate fully to account for the great difference exhibited in the tables.

The total admissions during each half yearly period are nearly equal, but the numbers under the heads fever and dysentery, are most numerous during the second half yearly period, while at the same time it will be observed, that the increase in the number of deaths, during this period, has been wholly oceasioned by these diseases, and hepatitis. Comparatively few deaths have taken place from Cholera amongst the European troops in this division ; it occurred to a limited extent in 1830, 1832 and 1833. In January 1830, the Madras European regiment lost 6 men at Seeunderabad, out of 30 attaeked ; the left wing of the same regiment in November 1832, while marching from Masulipatam, buried 9 men from 31 attacks ; and in May 1833, H. M.'s 45th lost 2 men, out of 26 attacked.

Tables No. 3 and 4, shew the amount of admissions and deaths, from the same diseases, which have occurred amongst the native troops at Secunderabad and Jaulnah, during a period of ten years. The total number treated has been 46,478, and 1,207 deaths have occurred in an aggregate strength of 81,042 men ; the average per eentage of sick to strength has been 57·351, of deaths to siek treated 2·596, and of deaths to strength 1·489.

Fevers, rheumatism and bowel complaints, have occasioned the most numerous admissions, and the mortality has resulted prineipally from these diseases and *cholera*. The admissions were considerably above the average in 1834, 1835, and 1838 ; and the mortality it will be observed, was greater than

usual in 1833, 1834 and 1838, in consequence of the greater prevalence of fever and cholera.

During the second half yearly period, as amongst the European troops, the number of admissions especially from acute disease, exceed those in the first half yearly period; the mortality also preponderates in a corresponding degree, from the greater prevalence and severity of fever, bowel complaints and cholera; the latter disease having appeared more or less in an epidemic form in 1830, 31, 32, 33, 37 and 1838; and it is worthy of remark that except in 1831, when in the month of January, the 50th regiment N. I. lost 28 men, out of 55 attacked, on the march from the northern divison, all these outbreaks of cholera, occurred amongst the troops while stationary at Secunderabad and Jaulnah. Thus in June 1837, 65 cases of cholera with 25 deaths, occurred in the 34th and 37th regiments N. I., at Secunderabad, and in July 1838, the 20th regiment buried 48 men out of 146 attacked, at the same station.

In the tabular statements Nos. 7 and 8, the comparative prevalence of the principal diseases amongst both European and native troops and mortality are contrasted, as in the reports of the preceding divisons; they afford at one view much interesting information on several points.

The other tables Nos 5 and 6, exhibit the admissions and deaths, from each disease, in the various classes, as in the former reports, during the five years from 1834 to 1838 inclusive;—the total sick from each class is also shewn, with the mortality, and the per centage of admissions to strength, and of deaths to sick treated. Amongst the European troops the greatest number of admissions have been from *fevers, bowel complaints,* including *dysentery and hepatitis, venereal affections, diseases of the brain and rheumatism;* and the most fatal have been *bowel complaints, fevers,* and *diseases of the brain.* The total admissions amount to 11,347, and the deaths 399, from an aggregate strength of 4,862 men, giving as the average per centage of sick to strength 233·381,

of deaths to sick treated 3·516, and of deaths to strength 8·206, being in these respects considerably above the average shewn in the preceding table for ten years.

In table No. 6, for Native troops, the numbers of admissions have been greatest from *fevers, bowel complaints and rheumatism;* and the greatest mortality has resulted from *fever, cholera, bowel complaints, diseases of the lungs, dropsies* and *rheumatism.* The total admissions into hospital have been 27,116, the deaths 655, from an aggregate strength of 36,744 men; the per centage of sick to strength being 73·933, of deaths to sick treated 2·411, and of deaths to strength 1·782; agreeing in these respects pretty closely, with the results given in table No. 4, for ten years.

The tabular statements No. 9 and 10, have been framed from these two returns, as usual; and they exhibit at one view, the proportion and percentage of admissions and deaths, from the principal classes of disease, both amongst the European and native troops.

The three following tables exhibit the sickness and mortality, which have occurred amongst the officers, the women, and the children of H. M.'s regiment, at Secunderabad, during a period of ten years.

SECUNDERABAD.

No. 14.—*Table exhibiting the sickness and mortality amongst the OFFICERS of H. M.'s Regiments at Secunderabad, during a period of ten years, from* 1829 *to* 1839, *exclusive of* 1833.

Aggregate strength 271. CLASSES.	DISEASES.	Admissions.	Deaths.	Total Admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris int. quot	49	0	182	4	66 ·423	2 ·197
	,, remittens..	66	2				
	,, com. cont.	67	2				
	Cholera	1	1	1	1	0 ·361	100 ·000
Diseases of the Abdominal viscera.......	Diarrhœa	48	0	92	5	33 ·576	5 ·434
	Dysenteria.. ...	23	5				
	Obstipatio......	8	0				
	Hæmorrhois....	4	0				
	Dyspepsia......	9	0				
	Hepatitis.......	41	2	41	2	14 ·964	4 ·878
Diseases of the Lungs	Catarrhus......	70	0	80	0	29 ·197	0 ·000
	Phthisis pulmonalis.........	2	0				
	Asthma........	0	0				
	Hæmoptysis....	2	0				
	Pneumonia.....	6	0				
Do. of the Brain.	Apoplexia......	3	1	6	1	2 ·189	16 ·666
	Epilepsia.......	1	0				
	Paralysis.......	1	0				
	Delirium Tremens.........	1	0				
	Anasarca.......	1	0	1	0	0 ·364	0 ·000
	Variola.........	1	1	1	1	0 ·364	100 ·000
	Rheumatismus,	33	0	33	0	12 ·043	0 ·000
Venereal affections..	Syphilis prim..	13	0	42	0	15 ·328	0 ·000
	,, Consecutiva	1	0				
	Gonorrhœa.. ..	26	0				
	Hernia humor..	1	0				
	Strictura urethrae.........	1	0				
	Morbi oculorum	3	0	3	0	1 ·094	0 ·000
	,, cutis....	6	0	6	0	2 ·189	0 ·000
	Other diseases.	151	0	151	0	55 ·109	0 ·000
	Total..	639	14	639	14	233 ·211	2 ·190

NOTE.—Per centage of deaths to strength, 5·109.

SECUNDERABAD.

No. 15.—*Table exhibiting the sickness and mortality amongst the WOMEN of H. M.'s Regiments at Secunderabad, during a period of ten years, from* 1829 *to* 1839, *exclusive of* 1833.

Aggregate strength. 1085. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
	Febris intermit quot.	151	1				
Fevers......	,, tertiana......	19	0	403	9	37 ·142	2· 233
	,, remittens.....	133	6				
	,, continua.....	97	2				
	Cholera....	14	7	14	7	1 ·290	50 ·000
	Diarrhœa.......	82	5				
	Dysenteria......	181	26				
	Peritonitis......	13	4				
Diseases of the abdominal viscera......	Colica..........	46	1				
	Dyspepsia......	16	0	372	36	34 ·285	9 ·677
	Obstipatio......	12	0				
	Hæmorrhois. ...	10	0				
	Splenitis........	9	0				
	Enteritis.... ...	3	0				
	Hepatitis.......	86	2	86	2	7· 926	2 ·325
	Catarrhus......	20	1				
Diseases of the Lungs	Dyspnœa.......	4	0				
	Asthma........	11	0	42	7	3 ·870	16 ·666
	Phthisis pulm..	6	6				
	Hæmoptysis.. ..	1	0				
	Epilepsia.......	1	0				
	Paralysis........	1	0				
Diseases of the Brain.	Hysteria........	13	0	23	3	2 ·119	13 ·043
	Tetauns........	1	1				
	Delirium trem..	4	0				
	Ebrietas........	3	2				
	Variola.........	9	1				
Eruptive fevers......	Varicella.......	3	0	15	1	1 ·382	6 ·666
	Rubeola.........	1	0				
	Erysipelas.,....	2	0				
	Anasarca.......	3	1	3	1	0 ·276	33 ·333
	Rheumatismus..	27	0	27	0	2 ·488	0· 000
	Amenorrhagia..	1	0				
	Menorrhagia. ..	12	0				
Peculiar diseases..	Parturitio.......	26	0	44	1	4 ·055	2 ·270
	Abortio.........	4	0				
	Scirrhus........	1	1				
	Morbi oculorum	35	0	35	0	3 ·225	0 ·000
	,, cutis......	2	0	2	0	0 ·181	0 ·000
	Other diseases..	127	2	127	2	11 ·705	1 ·574
	Total..	1193	69	1193	69	109 ·95	5 ·783

NOTE.—Per centage of deaths to strength, 6·359.

SECUNDERABAD.

No. 16.—*Table exhibiting the sickness and mortality amongst the* CHILDREN, *of H. M.'s Regiments at Secunderabad, during a period of ten years, from* 1829 *to* 1839, *exclusive of* 1833.

Aggregate strength. 1343. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers.	Febris intermit quotid........	350	2				
	,, remittens.. ...	177	12	784	28	58 ·376	3 ·570
	,, continua......	257	14				
	Cholera........	7	3	7	3	0 ·521	42 ·857
Diseases of the Abdominal viscera......	Diarrhœa......	203	31				
	Dysenteria.....	169	39				
	Obstipatio......	7	0				
	Marasmus......	15	9	399	79	29 ·709	19 ·795
	Colica..	4	0				
	Icterus.........	1	0				
	Hepatitis.......	7	1	7	1	0 ·521	14 ·286
Diseases of the lungs.	Cynanche......	12	3				
	Catarrhus......	58	3	85	9	6 ·329	10 ·588
	Pneumonia.....	3	2				
	Pertussis.	12	1				
Diseases of the brain.	Convulsio	50	38				
	Epelepsia.......	1	0	57	44	4 ·244	77 ·192
	Hydrocephalus.	5	5				
	Phrenitis.......	1	1				
Eruptive fevers......	Variola.........	24	3				
	Varicella.......	33	0	91	7	6 ·775	7 ·692
	Rubeola	30	3				
	Erysipelas......	4	1				
	Vermes....	2	0	2	0	0 ·148	0 ·000
	Morbi oculorum	77	0	77	0	5 ·733	0 ·000
	,, Cutis......	29	1	29	1	2 ·159	3 ·448
	Other diseases..	93	2	93	2	6 ·924	2 ·150
	Total..	1631	174	1631	174	121 ·444	10 ·668

NOTE.—Per centage of deaths to strength, 12·956.

NAGPORE.

General description. The extensive country subject to the Rajah of Nagpore, a powerful Mahratta prince, embraces that part of central India called Berar—and includes the provinces of Gundwanah,—of which the city of Nagpore is the capital, *Chotees-ghur, and Chandah. It is somewhat of a triangular shape, the base being towards the province of Allahabad, in Bengal, and the sides towards the Hyderabad territories, and the country of Orissa.

It lies between the parallels of north latitude 22° 40′, and 17° 20′, and between 78° and 83°, of east longitude—and is bounded on the north by Allahabad ; on the west and south-west by Hyderabad, from which it is separated by the Wurda and Godavery rivers, and on the east and south-east, by Bahar and Orissa, the Maha-nuddy or great river, being its natural boundary throughout a considerable part of the eastern confines. The general surface of the country is irregularly mountainous and hilly ; but there are many extensive highly cultivated plains,and also tracts of jungle or forest, covered with long coarse† grass,which in various places attains a height of 14 feet.

Rivers. The principal rivers are the Maha-nuddy and Wurda—The Maha-nuddy takes its rise in the mountainous parts of the Chotees-ghur district, and running first southerly, and then in an eastern direction, after an extremely tortuous course, and receiving many tributary streams, opens into the sea, 50 miles below Cuttack. The Wurda as before noticed, rises in the north-eastern part of Berar, and forming the line of boundary between the Nagpore and Hyderabad countries, unites with the Godavery at Serlouncheh.

Vegetable Productions. Though a great part of the country consists of waste land, and thinly peopled, jungly tracts, other portions

* The 26 Forts, or Ghurries.

† Called Elephant grass.

are highly cultivated and extremely fertile, producing luxuriant crops of wheat, rice, cholum, ragghy, cotton, and sugarcane, with several kinds of plants from which oil is obtained.

Articles of Export, &c.

The staple productions may be said to be cotton and grain, which are exported in considerable quantities, the former to the Bombay market, and the latter to the southern provinces; being transported chiefly on bullocks, the only carriage in use, and these bring back salt, cocoannts, and cocoannut-oil, spices, betel, &c. Timber, both for building and for firewood, is floated down the river Kunnan at the termination of the rains, and is also sometimes dragged up the stream by manual labour, but water carriage does not appear to be employed for any other purpose.

Political occurrences, connected with the English.

A considerable body of troops, called the Nagpore Subsidiary Force, has occupied this country since the year 1817, when in consequence of the treachery of the late rajah, Appah Sahib, in attacking a small force attached to the British resident at his court, he was dethroned, and kept some time in confinement, but ultimately escaped from his guards, and fled the country.

On the present prince, named Rajogee the Third, being placed on the musnud, an additional contingent force, consisting of 3,000 irregular or Mahratta horse, and two regiments of native infantry, officered by Europeans, was agreed by treaty, to be kept up for the preservation of the general peace. In 1830 however, an arrangement was entered into between the two governments, for disbanding the rajah's contingent, on condition of the payment of a certain annual tribute.

Subsidiary force,

The subsidiary force consists of one regiment of native cavalry, one troop European horse artillery, a battalion of foot artillery, one regiment of European infantry and four regiments of native infantry,—who are stationed at Kamptee, ten miles east of the city of Nagpore.

Station of Kamptee.

Kamptee.

Kamptee being now the only station occupied by the Company's army, throughout the Nagpore country,

Madras Lithographic Press

PLAN of the CANTONMENT of KAMPTEE.

Lithographed by B. C. B...

no information has been procurable by the Medical Board, relative to the general statistics of the provinces, except that which relates to Kamptee itself, and its immediate neighbourhood.

Kamptee is distant from Madras 722 miles, (travelling distance,) from Secunderabad 324, from Hoosingabad 178, from Calcutta 733, and from Bombay 577 miles.

Roads. There are four principal roads used by troops coming from, or returning to the Company's country—one by Chandah, along the Godavery, leading to Ellore; one by Ryepore towards Berhampore; and two to Hyderabad, one the most direct route by Nirmul, the other by Hingolee. The road by Chandah is in good order almost the whole way, but supplies are scarce, and there being a most unhealthy jungle to pass through, it is seldom travelled; and very rarely during the rainy, or cold seasons, on account of the rank and extensive jungle, from near Chandah, to within four stages of Ellore. The Nirmul road also, is unsafe during several months, and troops should not be sent by it, from the 1st of June, till the 1st of January. From the middle of August till the beginning of December, is the most dangerous period, but the journey is often made by posting, even in these months, without much apprehension, the time so occupied, being less than five days to Hyderabad. The road by Hingolee is sooner open, and regiments destined for the force, which pass through Secunderabad, towards the end of the year, are usually sent by it. The road by Ryepore is used by the regiments coming from Berhampore; they usually leave the Northern division in January, and arrive at Kamptee about the middle of March. The post to Calcutta goes along the same line, to within about 30 miles of Sumbhulpore, but travellers proceeding to Calcutta, prefer the road viâ Mirzapore, and from thence down the Ganges. There are two great northern roads towards the Nerbuddah, one leading to Hoossingabad, the other to Jubbulpore, but both are unsafe from August till December, on account of the jungle

to be traversed. The roads to Ellichpore and Jaulnah, are not considered unhealthy at any time, but the black soil during the rains, renders them extremely difficult to travel over.

Cantonment of Kamptee.

On the termination of the last Mahratta war, a cantonment for the subsidiary force was formed close to the British residency at Nagpore, at the foot of the celebrated Seetabuldee hill. The situation however proving unhealthy, it was abandoned after a few years, and a new site for a cantonment, ten miles east-ward of the city, selected on the bank of the Kunnan river.

The cantonment of Kamptee is situated in north latitude 21° 10″, and east longitude 79° 50,″ and occupies an extent of four miles and a half, along the right or south bank of the river Kunnan, which here pursues a tortuous course from west to east.*

The soil of the cantonment is the common black earth, of this part of the Deccan, interspersed with a very large proportion of the calcarious nodules, commonly called kunkar, its depth being in most places considerable. The surrounding country, for many miles in extent, is flat, destitute of wood, much intersected by ravines, and is only under cultivation during the cold and rainy seasons.

The ground is elevated, undulating and in some parts near the bazaars, and close to the river, much broken up into ravines, and nullahs.

The principal roads in the cantonment, are kept in good order, and those leading to the surrounding villages, afford sufficiently easy means of communication.

The officers houses, are for the most part situated close to the bank of the river, having spacious compounds, with excellent gardens.

The first range of houses on the bank of the river, is intended for field officers, and for the general staff, (the hospital

* This river takes its rise in a range of hills about 120 miles distant to the north-west, and empties itself into the Wyne Gungah, 54 miles below Kamptee, near Bundarla.

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VIEW of the RIGHT WING and MAIN GUARD EUROPEAN REGIMENT at KAMPTEE.

of one of the native corps, near the centre of the cantonment, being also on the bank of the river) the houses in this range are large and commodious, with extensive grounds attached to them, and the principal road runs along their whole extent. In front of these are the captains lines, another road separating them from those of the subalterns.*

A road intervenes between the sepoys huts, regimental bazaars, and the officers houses; the hospitals of the several native regiments, and the places of arms being parallel to, and in front of their respective regiments; the exceptions being that before mentioned, and the hospital of the native corps at the west end, which stands by itself, near the commencement of the European lines.

The places of arms of the cavalry are on a line with the stables, and the hospital is at the extreme east end.

In the centre of the cantonment are the Parsee's shops, the parade ground, the main piquet, and further south the sudr bazaar, to which a bridge thrown across a large ravine, leads. The bazaar is of considerable extent, having houses and shops of all descriptions and sizes, and as well as the Parsee's shops, contain every thing that can be required, either by natives or Europeans.

European Barracks. At the west of the lines, are the European barracks, which are commodious, lofty and situated on high ground, surrounded with excellent enclosed verandahs, and calculated to accommodate 1000 men. The barracks of the horse artillery adjoining them, are built in a similar manner, and enclosed at one end with a gate, having an open square in the front, they likewise are lofty and airy. In the same line further west, are the foot artillery barracks, consisting of two long ranges of buildings. A small, but well ventilated hospital, and places of arms, complete for a troop of native horse artillery follow next; and at the extreme east end, are several buildings for the use of the commissariat. Descending towards the river, are the three European hos-

* The houses are all thatched, and require some repairs annually, before the rains, and the grass is renewed about once in four or five years.

pitals, and the officers racket court; the hospitals are on well raised ground, open at all sides; that of the European regiment is situated about half a mile from the barracks, the artillery hospital being only half that distance from their barracks.

Bazaar. The European bazaar lies between the barracks and the river, and is well stocked with supplies of all kinds.

Public Buildings site of. With respect to public buildings their construction is eminently calculated to afford comfort, and preserve the health of the troops.—The lines of the native corps too, are for the most part on elevated ground, and the officers quarters, are perhaps the best to be found through the Madras presidency, though many of the buildings are not sufficiently raised, to render them free from damp in the rainy season.

River, banks of not unhealthy. Though the banks of rivers are by some good authorities thought objectionable, as the site of camps or cantonments, no fault can be found with the ground at Kamptee on this account; the banks of the Kunnan being perfectly bare of every kind of wood and vegetation, except crops of dry grain, usually cultivated throughout the country; and the bed of the river is chiefly sand with rocks, though some muddy banks are left on the subsiding of the waters.

Neighbouring Jungles the source of malaria. For a more probable source of malaria and consequent disease, the tracts of jungle both dense and extensive, by which both Nagpore and Kamptee are encompassed, may be looked to—This fruitful source of fever is distant from the north-east point of the city of Nagpore about 20 to 30 miles, but though the cantonment at Kamptee is ten miles nearer the heaviest part of the jungle, than the lines formerly occupied by the Madras troops, the Europeans as well as natives, are found to have generally suffered less from sickness, than in the position first taken up. It may therefore be presumed that the deleterious principle of the jungle atmosphere, becomes diluted or dissipated, in the open country, lying around the lines of the new cantonment.

Climate. This climate is remarkable among the Madras stations, both for the extremes of heat and cold experienced; and the year is naturally divided into three seasons, viz. the cold, hot and rainy. The transitions are generally regular and gradual, and may be anticipated to set in almost uniformly, at certain periods. The cold season commences about the 20th October, and continues till the middle of March;—December and January, being the coldest months.

There is a considerable diurnal range of temperature at this period, which is extremely prejudicial to weak constitutions, and to such as have been debilitated by disease or other causes; unless great attention be paid to precautionary measures, such as appropriate clothing;—regularity in diet and habits; and taking regular exercise, in the open air, morning and evening.

There are usually heavy dews, which are highly beneficial for agricultural purposes; and in the early part of the season fogs prevail—more particularly along the ravines and nullahs, where moisture exists to a greater extent than in the open plains. The mean temperature at this time, may be stated at 68° in the house, the lowest observed outside at sunrise, has been 36°* Far; and the highest 110°, from noon to 3 P. M.

The hot season includes from the middle of March, till about the 10th June, the greatest intensity of heat being from the latter end of April, till the first fall of rain in June;—at this time the thermometrical range, in an ordinary sized house, shut up, but without tats, is very limited, having been observed on many occasions, not to vary 10 degrees, and may be stated at from 96° to 104° Far, from 12 to 4 P.M.;—in larger houses tatted, it ranges from 82° to 90°;—but exposed outside, the thermometer has been observed to rise to 140°.

The rainy season next succeeds, making the third period, and the first fall of rain almost invariably occurs, about the

* Hoar frost is occasionally seen with thin pellicles of ice on small pools, but this may be accounted for, by the effect of evaporation lowering the temperature to the freezing point.

fourth of June, there is generally an interval of some days fair weather, after the first showers, before the monsoon is regularly established, during which the air is close, and extremely unpleasant. The greatest quantity of rain falls in August and September, the average for the year being 40 inches, but in the year 1838, it was less than 22 inches.

The equinoctial periods also, are marked by atmospherical disturbances, such as heavy squalls of wind with rain, and thunder and lightning, preceded generally by distressing sultriness, which often induces languor, restlessness and general *malaise,* with a sensation of great exhaustion, feelings which depend probably upon electrical influences, as they vanish almost immediately upon a changed condition of the atmosphere occurring. Occasional storms happen in almost every month of the year, which may be regarded as contributing to the general salubrity of the climate.

The prevailing winds are north and north-east, and west and south-west, the former blowing during the cold season, and the latter during the hot. The westerly wind sets in, early in the forenoon,and blows several hours during the day with considerable force, constituting what is commonly called the hot land wind, and it certainly is appropriately denominated. It commences generally about the latter part of April, and continues until the rains, during this time however, houses may be kept pleasantly cool by wet tatties, which often reduce the temperature as low as 76°, though, generally not lower than from 80° to 86°.

Officers' houses and gardens. The dwellings of the Officers, are as before stated, thatched bungalows, which are both commodious and comfortable, having glass doors and windows; and the compounds are usually laid out as gardens, the climate during the cold season, being favorable to horticulture. The supply of water from wells is plentiful ; and excellent oranges, peaches, figs, limes, lemons, pumplemose, and plantains are produced in great abundance, as also many flowering trees and shrubs ;—most of the kitchen garden vegetables such as peas, beans, cabbage, cauliflower, broccoli, spinage,

carrots, parsnips, turnips, celery, parsley, radishes, asparagus, artichokes, lettuces, beet, potatoes and knolkole; as well as also, all the common bazaar vegetables are to be had.

SINDWARRA.

The station of Sindwarra, which was occupied by a part of the Rajah's auxiliary troops, until that force was reduced in 1830, claims particular notice here, as being a place much resorted to by valetudinarians, and other visitors from Kamptee, during the hot months, or from March till June.

It lies about 70 miles distant, situated on an elevated table land, having an open space of ground free from jungle, on the summit, of about 4⅓ miles in circumference, exclusive of that part occupied by the village; and it is said to be on an average, 10 degrees cooler than Kamptee.

The climate has been much praised, by those who have taken refuge there from the great heat experienced at Nagpore and Kamptee; as during the hottest part of the season visitors are able to keep their doors open all day. At present there is only one good bungalow at the place, but there are two others, which might be put into repair at a small expense; they are now the property of the Rajah, but are always at the service of any person recommended by the resident.

Supplies are said to be abundant, and the materials for erecting temporary buildings, are close at hand.

The elevation of Sindwarra has been ascertained to be 1000 feet higher than Nagpore, which is 930 above the level of the sea; and about 50 miles further to the north-east, there is another and still more lofty range, the most elevated point of which is said to be upwards of 2000 feet higher, known as the Mahadeo or Puchmaree hills;—they also have been visited by persons from the neighbouring stations in Bengal, and the climate is said by some, to be the most delightful to be found in almost any part of India.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

As already mentioned, the troops composing this force, European and native are all located at Kamptee, and the tables of disease appended, will shew the nature and amount of sickness and mortality, which have occurred amongst both bodies of men, during the period of ten years, from 1829 to 1838, inclusive.

Amongst the European troops,the total of sick have amounted to 23,092, and the deaths to 337, from an aggregate strength of 9574 men, giving 241, as the annual number of admissions for every 100 men, and 1·632, as the average annual per centage of deaths to sick treated, whilst the per centage of deaths to strength, has been 3·937. The admissions were greatly above the average in 1834, and 1835; and the mortality was considerably increased in 1831, 1833, and 1837, from the greater prevalence and severity, of fever and dysentery, and also of cholera.

It will be seen from the general abstract table No. 2, that a considerable increase of sickness, but more especially of mortality, has taken place during the second half yearly period, which includes the wet and cold seasons; the latter as already mentioned, is most prejudicial to health, and fever and bowel complaints are not only more numerous, but also more severe, and generally more fatal, during this season of the year.

Fevers of the various types, but especially the intermittent, and remittent, dysentery, diarrhœa, hepatitis, rheumatism and syphilis have occasioned the greatest number of admissions, and the mortality has chiefly resulted from the same diseases, and from *cholera and thoracic complaints.* The per centage of admissions from these diseases,to the strength,and of deaths to the sick treated, are given in the table No. 2.

The following extracts from the medical reports by Superintending surgeon Adams, long resident at Kamptee, will

NAGPORE SUBSIDIARY FORCE.

Table No. 1.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838.

Years.			Diseases. Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	790	0	0	0	3	0	0	23	69	0	0	25	112	37	0	61	1	0	10	65	0	130	30	0	43	151	785	224 ·713	1 ·700	3 ·821
		2d ,,	974	1	0	0	1	0	0	30	89	0	0	27	340	29	0	65	1	0	6	83	0	103	25	0	49	125				
	Died.	1st half.	11	0	0	0	0	0	0	0	4	0	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	2				
		2d ,,	19	0	0	0	0	0	0	0	5	0	0	0	3	2	0	3	1	0	0	1	0	2	1	0	0	1				
1830	Admitted.	1st half.	860	1	0	0	7	0	0	37	105	0	0	55	111	27	0	58	2	0	8	85	0	124	14	0	60	166	918	202 ·109	1 ·006	2 ·215
		2d ,,	1056	0	0	0	1	0	1	27	81	0	11	21	227	198	0	47	0	0	10	81	0	89	24	0	68	170				
	Died.	1st half.	7	1	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2				
		2d ,,	14	0	0	0	0	0	1	1	4	0	0	0	0	2	0	4	0	0	0	1	0	0	0	0	0	1				
1831	Admitted.	1st half.	957	0	0	0	1	0	0	31	80	0	19	11	140	61	0	70	0	0	8	92	0	98	21	0	76	249	918	255 ·773	1 ·831	4 ·684
		2d ,,	1301	0	0	0	29	0	2	44	183	0	5	13	332	180	0	86	0	0	12	93	0	9[illegible]	6	0	80	236				
	Died.	1st half.	11	0	0	0	0	0	0	1	2	0	0	0	0	0	0	5	0	0	0	0	0	0	2	0	0	1				
		2d ,,	32	0	0	0	9	0	1	0	10	0	0	0	1	4	0	2	0	0	0	2	0	1	0	0	0	2				
1832	Admitted.	1st half.	896	0	0	0	1	0	11	24	45	0	17	5	165	35	0	51	0	0	7	80	0	77	10	0	110	260	855	230 ·526	1 ·674	3 ·859
		2d ,,	1075	0	0	0	19	0	0	38	66	0	17	5	265	41	0	38	0	0	9	67	0	92	17	0	105	296				
	Died.	1st half.	12	0	0	0	0	0	2	0	3	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	1	2				
		2d ,,	21	0	0	0	6	0	0	0	1	0	0	1	1	1	0	1	0	0	0	0	0	0	3	0	0	7				
1833	Admitted.	1st half.	1025	2	0	0	23	0	0	34	37	0	28	5	145	16	0	49	0	0	13	72	0	163	12	0	103	323	999	271 ·971	2 ·281	6 ·206
		2d ,,	1692	0	0	0	21	0	0	107	164	0	51	7	469	112	0	60	1	0	8	60	0	268	13	0	98	253				
	Died.	1st half.	18	2	0	0	8	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	3				
		2d ,,	44	0	0	0	6	0	0	4	11	0	1	0	6	3	0	2	0	0	0	1	0	1	2	0	0	7				
1834	Admitted.	1st half.	1202	1	0	1	12	0	61	25	40	0	16	3	211	18	0	118	1	0	15	118	0	196	27	0	110	235	1052	324 ·524	1 ·230	3 ·992
		2d ,,	2212	1	0	0	17	0	142	66	108	0	103	0	1078	21	0	96	4	0	8	105	0	143	37	0	104	179				
	Died.	1st half.	13	0	0	0	0	0	1	1	2	0	0	0	1	3	0	1	0	0	0	1	0	1	0	0	0	2				
		2d ,,	29	0	0	0	2	0	0	4	4	0	0	0	8	1	0	5	0	0	0	1	0	2	0	0	0	4				
1835	Admitted.	1st half.	1338	0	0	0	2	1	127	43	17	0	39	11	445	15	0	55	5	0	7	108	0	103	37	0	110	214	969	304 ·024	0 ·916	2 ·786
		2d ,,	1608	0	0	0	2	5	215	44	59	0	72	2	398	33	0	58	0	0	8	155	0	152	41	0	114	246				
	Died.	1st half,	10	0	0	0	0	0	1	1	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4				
		2d ,,	17	0	0	0	0	0	0	0	1	0	0	0	2	5	0	1	0	0	0	3	0	0	2	0	0	3				
1836	Admitted.	1st half.	1218	1	0	0	0	2	140	10	16	0	47	1	189	33	0	47	1	0	12	113	0	159	36	0	137	274	1001	227 ·772	1 ·535	3 ·496
		2d ,,	1062	0	0	0	2	9	72	40	62	0	32	0	231	36	0	52	1	0	19	79	0	119	18	0	98	192				
	Died.	1st half.	14	1	0	0	0	0	1	1	0	0	0	0	2	4	0	1	0	0	0	0	0	0	0	0	1	3				
		2d ,,	21	0	0	0	1	0	0	0	7	0	0	0	1	3	0	1	0	0	0	2	0	0	1	0	1	4				
1837	Admitted.	1st half.	895	8	0	0	1	3	77	18	21	0	28	4	116	16	0	49	0	0	10	66	0	127	13	0	102	233	1024	196 ·757	2 ·481	4 ·832
		2d ,,	1120	1	2	0	7	3	65	56	79	0	39	4	216	34	0	49	4	0	25	66	0	131	28	0	87	224				
	Died.	1st half.	25	8	0	0	0	0	1	0	1	0	0	0	2	3	0	5	0	0	1	1	0	0	0	0	1	2				
		2d ,,	25	0	0	0	4	0	0	3	5	0	0	0	2	2	0	0	0	0	1	2	0	1	1	0	0	4				
1838	Admitted.	1st half.	938	2	0	0	1	3	33	16	31	0	33	69	116	5	0	49	0	0	3	61	0	144	80	0	77	215	1023	168 ·230	1 ·975	3 ·323
		2d ,,	783	1	4	0	3	7	17	30	58	0	31	36	134	3	0	31	0	0	7	66	0	132	21	0	63	136				
	Died.	1st half.	19	1	0	0	0	0	0	1	5	0	0	2	1	2	0	2	0	0	0	0	0	0	3	0	1	1				
		2d ,,	15	1	0	0	2	0	0	0	4	0	0	1	3	0	0	0	0	0	0	1	0	3	0	0	0	0				

NAGPORE SUBSIDIARY FORCE

Table No. 2.—Europeans—Abstract of the preceding Returns, shewing the total number of admissions and Deaths &c. from 1829 *to* 1838.

DISEASES.

Aggregate strength. 9,574.	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.
1829 to 1838. Admitted. 1st half.	10,119	15	0	1	51	9	449	260	464	0	221	189	1778	263	0
1829 to 1838. Admitted. 2d ,,	12,973	4	6	0	102	24	514	482	949	0	361	115	3690	687	0
Total..	23,092	19	6	1	153	33	963	742	1413	0	582	304	5468	950	0
1829 to 1838. Died. 1st half.	140	13	0	0	9	0	6	5	24	0	0	3	7	18	0
1829 to 1838. Died. 2d ,,	237	1	0	0	30	0	2	12	52	0	1	2	27	23	0
Total..	377	14	0	0	39	0	8	17	76	0	1	5	34	41	0
Average per centage of sick to strength.	241·194	0·198	0.062	0.010	1·598	0·344	10·058	7·750	14·758	0	6 078	3·175	57·113	9·922	0
Do. of deaths to sick treated.	1·632	73·684	0	0	25·490	0	0·830	2·291	5·378	0	0·171	1·644	0·621	4·315	0
Do. per centage of deaths to strength.	3·937	0·146	0	0	0·407	0	0·083	0·177	0·793	0	0·010	0·052	0·355	0·428	0

Aggregate strength. 9,574.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
1829 to 1838. Admitted. 1st half.	607	10	0	93	860	0	1321	280	0	928	2320
1829 to 1838. Admitted. 2d ,,	585	11	0	112	859	0	1319	230	0	866	2057
Total..	1192	21	0	205	1719	0	2640	510	0	1794	4377
1829 to 1838. Died. 1st half.	18	0	0	1	3	0	1	6	0	4	22
1829 to 1838. Died. 2d ,,	17	1	0	1	14	0	10	10	0	1	33
Total..	35	1	0	2	17	0	11	16	0	5	55
Average per centage of sick to strength.	12·450	0·219	0	2·141	17·954	0	27·574	5·326	0	18·738	45·717
Do. of deaths to sick treated.	2·936	4·761	0	0·975	0·988	0	0·416	3.137	0	0·278	1·256
Do. per centage of deaths to strength.	0·365	0·010	0	0.020	0·177	0	0·114	0·167	0	0·052	0·574

NAGPORE SUBSIDIARY FORCE.

Table No. 3.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 to 1838.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1238	0	0	0	0	0	0	22	7	0	0	26	429	64	0	3	1	0	8	121	0	63	6	0	128	360	5828	46 ·585	1 ·731	0 ·806
		2d ,,	1477	0	0	5	9	0	0	37	6	0	0	79	582	23	0	0	2	0	31	181	1	54	4	0	161	299				
	Died.	1st half.	17	0	0	0	0	0	0	1	0	0	0	1	7	3	0	0	0	0	0	1	0	0	1	0	2	1				
		2d ,,	30	0	0	2	4	0	0	1	1	0	0	0	9	0	0	0	0	0	0	1	1	1	4	0	2	4				
1830	Admitted.	1st half.	1334	0	0	0	0	0	0	22	5	0	0	3	583	4	0	2	5	0	32	115	5	53	3	0	93	409	5364	49 ·906	1 ·606	0 ·801
		2d ,,	1343	1	0	0	0	0	0	27	6	0	3	1	680	13	0	4	1	0	20	110	3	30	2	0	131	311				
	Died.	1st half.	13	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	3	1	0	1	0	0	3				
		2d ,,	30	1	0	0	0	0	0	0	0	0	0	1	6	0	0	2	0	0	0	5	3	0	1	0	1	10				
1831	Admitted.	1st half.	1156	1	0	0	2	0	0	23	4	0	43	19	312	21	0	1	1	0	19	100	5	44	4	0	147	410	4952	57 ·209	2 ·576	1 .474
		2d ,,	1677	0	0	13	24	0	0	33	19	0	25	16	1009	46	0	0	5	0	28	101	2	32	4	0	75	245				
	Died.	1st half.	20	1	0	0	1	0	0	1	0	0	0	2	4	2	0	0	0	0	0	2	2	2	1	0	0	2				
		2d ,,	53	0	0	5	13	0	0	0	3	0	0	1	12	0	0	0	0	0	0	3	1	0	4	0	0	11				
1832	Admitted.	1st half.	1143	0	0	1	5	0	0	10	3	0	71	0	532	9	0	0	2	0	13	113	0	34	20	0	80	250	5066	56 ·632	2 ·544	1 ·440
		2d ,,	1726	0	0	15	18	0	0	50	17	0	78	0	1014	3	0	1	3	0	11	96	0	22	1	0	78	319				
	Died.	1st half.	23	0	0	1	3	0	0	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	5	0	1	6				
		2d ,,	50	0	0	4	13	0	0	1	2	0	0	0	8	1	0	0	0	0	0	7	0	1	1	0	0	12				
1833	Admitted.	1st half.	1193	1	1	8	13	0	0	35	10	0	9	0	425	7	0	5	0	0	25	96	0	59	4	0	105	390	4604	67 ·702	2 ·630	1 ·781
		2d ,,	1924	1	2	3	39	0	0	45	28	0	30	1	1185	7	0	3	0	0	16	115	0	59	4	0	84	302				
	Died.	1st half.	30	1	0	1	7	0	0	3	0	0	0	0	11	2	0	0	0	0	0	2	0	0	0	0	0	3				
		2d ,,	52	1	1	1	25	0	0	0	0	0	0	1	12	1	0	0	0	0	0	4	0	2	2	0	1	1				
1834	Admitted.	1st half.	1013	0	1	0	1	15	0	12	3	0	47	2	373	8	0	4	0	0	20	115	11	45	13	0	96	247	4636	97 ·778	1 ·323	1 ·294
		2d ,,	3520	1	6	12	0	14	1	28	31	0	445	0	2368	3	0	5	0	0	9	159	1	25	16	0	92	304				
	Died.	1st half.	20	0	1	0	0	0	0	1	0	0	0	0	6	0	0	1	0	0	0	3	1	2	2	0	0	3				
		2d ,,	40	0	0	3	0	0	0	4	2	0	0	0	12	0	0	0	0	0	0	5	0	0	5	0	1	8				
1835	Admitted,	1st half.	1965	1	6	2	0	55	0	30	8	0	126	14	1029	64	11	3	1	0	9	138	0	22	10	0	144	292	4542	84 ·610	1 ·821	1 ·541
		2d ,,	1878	0	3	0	3	51	0	21	20	0	83	6	1094	45	3	3	2	0	21	137	0	33	7	0	116	230				
	Died.	1st half.	38	0	0	0	0	0	0	2	3	0	0	3	16	0	0	0	0	0	0	2	0	0	3	0	0	9				
		2d ,,	32	0	2	0	1	0	0	1	2	0	0	0	15	3	0	0	0	0	0	2	0	0	1	0	0	5				
1836	Admitted.	1st half.	1280	0	3	2	0	29	1	8	4	0	66	7	552	56	1	1	4	0	11	111	0	28	17	0	98	281	4631	59 ·425	2 .107	1 ·252
		2d ,,	1472	1	1	1	0	22	0	17	11	0	90	7	709	71	3	2	1	0	10	141	0	24	20	0	89	252				
	Died.	1st half.	30	0	1	1	0	0	0	1	2	0	0	2	13	2	0	0	0	0	0	2	0	1	0	0	0	5				
		2d ,,	28	0	0	1	0	0	0	0	2	0	0	2	8	1	0	0	0	0	0	1	0	0	7	0	0	6				
1837	Admitted.	1st half.	1080	0	1	2	0	35	2	10	5	0	85	13	390	41	2	0	1	0	19	108	0	26	10	0	99	231	4491	57 ·804	2 ·349	1 ·358
		2d ,,	1516	0	6	7	31	21	0	19	17	0	94	12	666	50	0	0	3	0	58	139	1	25	29	0	113	225				
	Died.	1st half.	16	0	1	0	0	0	0	1	0	0	2	1	5	1	0	0	0	0	0	1	0	0	1	0	0	3				
		2d ,,	45	0	0	1	18	0	0	0	4	0	0	2	7	4	0	0	0	0	0	1	0	0	1	0	2	5				
1838	Admitted.	1st half.	1597	0	5	2	2	29	1	60	18	0	305	25	456	106	6	0	5	0	12	137	15	39	35	0	112	227	5109	54 ·433	1 ·837	1 ·000
		2d ,,	1233	0	4	2	1	24	0	27	11	0	240	5	422	82	1	0	1	0	22	78	0	26	14	0	100	173				
	Died.	1st half.	34	0	1	1	1	0	0	0	1	0	0	2	11	3	0	0	0	0	0	3	2	0	3	0	1	5				
		2d ,,	18	0	1	1	1	0	0	1	1	0	0	0	2	3	0	0	0	0	0	2	0	0	1	0	0	5				

NAGPORE SUBSIDIARY FORCE.

Table No. 4.—Natives—Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

1829 to 1838.	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.
Aggregate strength. 49.313														
Admitted. 1st half.	12999	3	17	17	23	163	4	232	67	0	752	109	5081	381
Admitted. 2d ,,	17766	4	22	58	125	132	1	301	166	0	1088	127	9729	343
Total..	30765	7	39	75	148	295	5	536	233	0	1840	236	14810	723
Died...... 1st half.	241	2	4	4	12	0	0	10	8	0	2	11	80	13
Died...... 2d ,,	378	2	4	18	75	0	0	8	17	0	0	7	91	13
Total..	619	4	8	22	87	0	0	18	25	0	2	18	171	26
Average per centage of sick to strength.	62 ·387	0·014	0·079	0·152	0·300	0·598	0·010	1·086	0·472	0	3·731	0·478	30·032	1·466
Do. of deaths to sick treated.	2 ·012	57·142	20·512	29·333	58·783	0	0	3·358	10·729	0	0·108	7·627	1·154	3·59[illegible]
Do. per centage of deaths to strength.	1 ·255	0·008	0·016	0·044	0·176	0	0	0·036	0·050	0	0·004	0·036	0·346	0·05[illegible]

1829 to 1838.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate strength. 49.313												
Admitted. 1st half.	20	19	20	0	168	1154	36	413	122	0	1102	3097
Admitted. 2d ,,	7	18	1[illegible]	0	226	1257	8	330	101	0	1042	2660
Total..	27	37	38	0	394	2411	44	743	223	0	2144	5·757
Died...... 1st half.	0	1	0	0	0	22	6	5	17	0	4	40
Died...... 2d ,,	0	2	0	0	0	31	5	4	27	0	7	67
Total..	0	3	0	0	0	53	11	9	44	0	11	107
Average per centage of sick to strength.	0·054	0·075	0·077	0	0·798	4·889	0·089	1·506	0·452	0	4·347	11·674
Do. of deaths to sick treated.	0	8·108	0	0	0	2·198	25·0	1·211	19·730	0	0·513	1·858
Do. per centage of deaths to strength.	0	0·006	0	0	0	0·107	0·022	0·018	0·089	0	0·022	0·216

NAGPORE SUBSIDIARY FORCE.

No. 5.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 5070. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	157	0	277	0	1409	21	2503	28	3912	49	77 ·159	1 ·252
	,, intermit quot.	787	5	1539	13								
	,, tertiana......	290	1	518	3								
	,, remittens.....	87	13	127	11								
	,, continua......	88	2	42	1								
	Cholera	16	0	31	9	16	0	31	9	47	9	0 ·927	19 ·148
Diseases of the Abdominal viscera.......	Dysenteria acuta	107	11	317	20	128	11	366	21	494	32	9 ·743	6 ·477
	,, chronica......	21	0	49	1								
	Diarrhæa.......	111	4	236	7	423	6	509	12	932	18	18 ·382	1 ·931
	Colica..........	23	0	38	0								
	Obstipatio.......	38	0	26	0								
	Hœmorrhois....	42	0	60	0								
	Enteritis........	9	0	11	2								
	Peritonitis......	3	0	3	0								
	Gastritis........	18	0	10	0								
	Dyspepsia.......	169	2	125	3								
	Hepatitis acuta.	187	6	214	5	318	10	289	5	607	15	11 ·972	2 ·471
	,, chronica......	131	4	75	0								
Diseases of the Lungs and Heart	Catarrhus	136	1	86	2	183	3	135	4	318	7	6 ·272	2 ·201
	Asthma	5	0	3	0								
	Phthisis pulmonalis.........	3	0	2	0								
	Hœmoptysis.....	2	0	1	0								
	Pleuritis.........	0	0	0	0								
	Pneumonia......	26	0	30	1								
	Carditis	0	0	1	0								
	Palpitatio	2	0	1	0								
	Dyspnœa.......	9	2	11	1								
Diseases of the Brain.	Apoplexia......	12	10	3	1	665	16	694	5	1359	21	26 ·804	1 ·545
	Epilepsia.......	18	0	27	0								
	Paralysis.......	5	0	9	1								
	Cephalalgia	176	1	135	3								
	Phrenitis........	8	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	0	0	1	0								
	Mania..........	7	0	8	0								
	Hydrophobia...	1	1	0	0								
	Delirium Tremens.........	73	3	57	0								
	Ebrietas.........	365	1	454	0								
Diseases of the Eye..	Morbi oculorum..........	47	1	67	1	47	1	67	1	114	2	2 ·248	1 ·754
Do. ,, Skin	,, cutis........	9	0	24	0	9	0	24	0	33	0	0 ·650	0
Eruptive Fevers......	Variola.........	0	0	0	0	7	0	11	0	18	0	0 ·355	0
	Varicella........	0	0	0	0								
	Rubeola.........	3	0	4	0								
	Scarlatina.......	0	0	0	0								
	Erysipelas.......	4	0	7	0								
Dropsies....	Anasarca.......	12	0	13	1	19	1	24	2	43	3	0 ·848	6 ·976
	Ascites..........	5	1	11	1								
	Hydrothorax....	2	0	0	0								
Rheumatic affections.	Rheumatismus acutus........	247	0	301	3	470	2	481	9	951	11	18 ·757	1 ·156
	,, chronicus....	219	2	174	6								
	Neuralgia	0	0	0	0								
	Odontalgia......	4	0	6	0								
Venereal affections..	Syphilis primitiva..........	302	0	267	2	753	1	667	6	1420	7	28 ·007	0 ·492
	,, consecutiva...	17	0	23	1								
	Gonorrhœa.....	329	0	281	1								
	Hernia humoralis..........	73	1	89	2								
	Strictura urethræ..........	32	0	7	0								
Specific diseases.....	Atrophia........	0	0	6	0	10	0	16	0	26	0	0 ·512	0
	Beriberi.........	2	0	0	0								
	Elephantiasis...	0	0	0	0								
	Lepra..	0	0	0	0								
	Dracunculus....	0	0	0	0								
	Ulcus phagedenicum.........	0	0	1	0								
	Scrophula.......	8	0	8	0								
	Scorbutus......	0	0	1	0								
Punishment.	Punitus........	100	1	115	0	100	1	115	0	215	1	4 ·240	0 ·465
Wounds and injuries...	Fractura........	27	1	16	0	536	3	446	1	982	4	19 ·368	0 ·407
	Luxatio.........	18	0	8	0								
	Subluxatio......	76	0	56	0								
	Vulnus sclopitorum........	9	0	5	1								
	,, incisum......	68	0	46	0								
	Contusio	133	1	300	0								
	Ambustio......	5	1	15	0								
Other diseases, including Phlogosis, Ulcus, &c.............		498	5	407	4	498	5	407	4	*905	+9	17 ·850	0 ·994
Total......		5591	81	6785	107	5591	81	6785	107	12376	188	244 ·102	1 ·519

Average per centage of deaths to strength during these five years, has been 3·708.

* Of this number were

Phlogosis.............	176	2
Do. Do. Ulcus.........	218	1
Do. Do. Bubo simplex.	226	0
Total,......	650	3

+ The deaths under this head, include besides those accounted for in the preceding note, two from melancholia, two from anæmia, and two from splenitis, under which latter head the admissions have amounted to 148.

NAGPORE SUBSIDIARY FORCE.

No. 9. —*Table shewing the amount of Admissions and Deaths from the principal classes of disease for the period of five years, from* 1834 *to* 1838 *inclusive, with the proportion of Admissions from each to the total of sick treated, and of deaths to the total mortality.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																				
Total Admissions.... 12,376	3912	$\frac{1}{3}$	47	$\frac{1}{263}$	494	$\frac{1}{25}$	932	$\frac{1}{13}$	607	$\frac{1}{20}$	318	$\frac{1}{39}$	1359	$\frac{1}{9}$	43	$\frac{1}{288}$	951	$\frac{1}{13}$	1420	$\frac{2}{17}$
,, Deaths........ 188	49	$\frac{1}{4}$	9	$\frac{1}{21}$	32	$\frac{1}{6}$	18	$\frac{2}{21}$	15	$\frac{2}{25}$	7	$\frac{1}{27}$	21	$\frac{1}{9}$	3	$\frac{1}{63}$	11	$\frac{1}{17}$	7	$\frac{1}{27}$
Native Troops.																				
Total Admissions ..16,554	10,255	$\frac{2}{3}$	38	$\frac{1}{435}$	128	$\frac{1}{129}$	715	$\frac{1}{23}$	18	$\frac{1}{920}$	171	$\frac{1}{97}$	92	$\frac{1}{180}$	60	$\frac{1}{276}$	1284	$\frac{1}{13}$	293	$\frac{2}{113}$
,, Deaths........ 301	126	$\frac{2}{5}$	21	$\frac{1}{14}$	17	$\frac{4}{71}$	32	$\frac{2}{19}$	1	$\frac{1}{301}$	25	$\frac{1}{12}$	4	$\frac{1}{75}$	15	$\frac{1}{20}$	23	$\frac{1}{13}$	3	$\frac{1}{100}$

No. 10.—*Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 5070.																				
Per centage of sick to strength	3912	77·159	47	0·927	494	9·743	932	18·382	607	11·972	318	6·272	1359	26·804	43	0·848	951	18·757	1420	28·007
,, of deaths to sick.....	49	1·252	9	19.148	32	6·477	18	1·931	15	2·471	7	2·201	21	1·545	3	6·976	11	1·156	7	0·492
,, of deaths to strength..	49	0·966	9	0.177	32	0·631	18	0·355	15	0·295	7	0·138	21	0·414	3	0·059	11	0·216	7	0·138
Native Troops. STRENGTH, 23,498.																				
Per centage of sick to strength	10255	43·642	38	0.161	128	0·544	715	3·042	18	0·076	171	0·727	92	0·391	60	0·255	1284	5·464	293	1·246
,, of deaths to sick.....	126	1·228	21	55·263	17	13·281	32	4·475	1	5·555	25	14·619	4	4·347	15	25·000	23	1·791	3	1·023
,, of deaths to strength..	126	0·536	21	0·089	17	0·072	32	0·136	1	0·004	25	0·106	4	0·017	15	0·063	23	0·097	3	0·012

one from varix; the remaining one is not particularized.

shew the deadly nature of fever in some seasons, at that station, and point out the treatment best adapted for it.

" Adverting to the general plan of treatment pursued in the several hospitals under this superintendence, I have nothing very important to offer for the consideration of the Board, I may observe that Surgeon Anderson of the M. E. regiment, inclines more to the practice of blood letting in fevers, than any of his predecessors, and I am myself an advocate for that mode of treatment, which if adopted at all,should be early, and repeated according to symptoms, and the constitution of the patient. I think after a copious bleeding, which may be followed up by leeches when necessary, a good dose of calomel joined with opium, say ten to twenty grains of the former, and at least two of the latter, by determining freely to the skin, as well as clearing out the bowels, in a mild but effectual manner,tends more to induce a perfect intermission, than any thing I know. Bark or quinine of course, to be resorted to as soon as admissible."

" In relapse cases of fever however, which are by far the most numerous, we have to deal with, I am of opinion that general bleeding is not advisable, and would even employ leeches as sparingly as possible, on such occasions."—*Dated* 31*st December*,1835.

" Remittent fever became exceedingly prevalent in the months of May and June, attacking chiefly the new comers to the station, such as officers in the prime of life; the European soldiers were also sufferers to a considerable extent from the same disease, though proportionally less than the officers."

" Apoplectic attacks were frequent among the soldiers, and one or two cases were brought in moribund, or died on the way from the barracks to the hospital, there being eight deaths from apoplexy, which greatly swells the list of European casualties."

" In some of the apoplectic cases, the most prompt and efficient bleeding from the arm, failed in saving the patient

whilst others were past recovery before assistance could reach them."

"In fever the most successful plan of treatment seemed to be early vascular depletion, general or local, or both according to the symptoms and condition of the patient and when from any circumstances this was not at once practised, and repeated when necessary, the result was too often fatal in spite of every exertion."

"Next to depletion full doses of calomel and opium, (calom. grxx, opii grii) given at night and followed by some mild purgative in the morning, were very beneficial—The anodyne and diaphoretic effects of the calomel and opium, were tranquillizing through the night, and prepared the bowels to be favorably acted upon by the aperient, which if the stomach would bear it, was the common purging mixture of senna and salts, and afterwards the mixture recommended by Sir A. Cooper, leaving out the tinct : opii ; viz. mist : ammon : acetat : ℥vi, magnes : sulph : ℥i, given in doses of ℥iss, with a little water, every two or three hours, till sufficient effect was obtained; or a mixture composed of pulv : rhei ʒss, or ℈ii, magnes : sulph : ℥ss, aq : ℥ vi, tinct cardam : ʒiii, which was given in doses of ℥iss or ℥ii and repeated according to circumstances. Sometimes a dose of rhubarb and magnesia, made into a draught, with the addition of spt. æther: nitrici ʒss would be retained, and act favorably when the stomach rejected every thing else.—Besides the night dose of calomel and opium, the same medicines in smaller doses, were given at proper intervals during the day, taking care to relieve symptoms of irritation, whenever they arose by timely local depletion ; in some cases, Dovers powder was advantageously substituted for the pure opium, and vice versa."

"Quinine, after mercurials and aperients had taken due effect, was generally found safe and highly serviceable, also blisters to the back of the neck, or other parts, according to indications, and frequent sponging of the surface ; cold lotions to the shaved head, gave much relief."

"In protracted convalescence from debility, with a relaxed and irritated state of bowels, and night sweats, the nitric acid, with some light bitter infusion answered well."

"The lamentable mortality among the European officers of the force, has had no parallel since this cantonment was first occupied by Madras troops, from December 1824, to the present time; the number of commissioned officers being 109, and the deaths 7, and four have proceeded on sick certificate, either to England or the coast."

"In the treatment of fevers, whether in Europeans or natives, there is one precaution which I think should be attended to, viz. when pain or irritability of stomach is present, the use of emetics, especially tartarized antimony, even in the smallest quantity, should be avoided, leeches to the pained part being in such cases necessary."—*Dated 30th June*, 1837.

Superintending surgeon Stevenson remarks thus

"The officers of the force, have enjoyed a striking immunity from disease this season. The fevers appeared to put on two distinct forms, the one characterized by high vascular action, intense heat of surface, acute headache, and in some cases, irritability of stomach; the other was chiefly of an asthenic nature, marked by stupor, small, frequent, contracted pulse, heat not much above the natural standard; the disease in this form ran its course very gradually, much resembling typhus. The men of the B. Troop horse brigade, were the principal subjects of the first class, being robust young men, who were rendered more liable to be attacked with fever, from exposure on the long march they had to this station, at rather an advanced part of the season; and on arrival here, they had to encounter the hot weather, which was of great intensity. They were also attacked with influenza, but although it was accompanied with febrile symptoms for some days, it was a mild disease. In these cases, bleeding, both general and local, was imperatively required, with large doses of calomel and active purgation."

"The men of the 3d Battalion artillery and Madras European regiment, mostly exhibited the low continued form of

the disease, in them, general bleeding was very rarely had recourse to, but determinations to particular organs, such as the head, stomach, or liver, were treated by active leeching and blisters, cold lotions to the head, and leeches and blisters to the nape of the neck, were found of great use when that organ was much effected;—the affusion of cold water on the head, was tried in several cases with advantage; in one or two instances the powers of life were overwhelmed on the onset of the disease, the patient being in a state of collapse and sinking, as if from cholera."—*Dated 30th June,* 1838.

Tables No 3 and 4, in like manner shew the amount of sickness and mortality, amongst the native troops, for the same period of ten years. The total number treated has been 30765, and 619 deaths have occurred, from an aggregate strength, of 49313 men; thus giving 62·387 admissions into hospital for every 100 men, and 2·012 deaths per cent on the number treated, and 1·255 deaths per cent on the strength; these averages have been pretty uniform, during the entire period.

As amongst the European troops, the admissions and deaths have been most numerous, during the second half yearly period, and were caused by fever, cholera and bowel complaints.

The most numerous admissions have been from *fever* (nearly one-half of the whole number admitted, were from intermittent fever) *rheumatism, bowel complaints, cholera and syphilis;* the mortality has resulted principally from *fever, cholera, rheumatism, thoracic diseases and bowel complaints.*

Cholera prevailed, but to a limited extent, amongst the European troops, in 1831, 32, 33 and 1834, and amongst the native troops, in 1831, 32, 33 and 1837; and on all these occasions, whilst both bodies of men were stationary at Kamptee; the greatest number of cases, and of deaths, occurred in the months of June, July, August and October.

In the large and more comprehensive tables Nos. 5 and 6, for five years, the diseases have been classified in the usual

manner, both for the European and native sick. The total admissions amongst the European troops, amount to 12376, and 188 deaths have taken place, from an aggregate strength of 5070 men ; the per centage of admissions to strength, being 244·102, of deaths to sick treated, 1·519, and of deaths to strength, 3·708 ; coinciding in these respects, pretty closely, with the results given in the table for ten years.

The corresponding table No. 6, for the native troops, gives 70·448, as the annual number of admissions for every 100 men, and 1·818 deaths per cent on the sick treated, while the per centage of deaths to strength, during the same period, has been 1·280 ; the total admissions being 16554, and the deaths 301, from an aggregate strength of 23,498 men.

The tabular statements Nos. 7, 8, 9 and 10, exhibit at one view, the proportion and per centage of admissions and deaths, from the most important diseases, and from the principal classes of disease, both amongst the European and native troops.

The three following tables have been drawn out, to exhibit the relative healthiness of the horse and foot artillery, and of the Madras European regiment, which composed the European part of the Subsidiary force.

No. 11.—*Table exhibiting the number of admissions and deaths, in the* 1st *Madras European regiment at Kamptee, from* 1829 *to* 1839, *exclusive of* 1831.

Aggregate strength 6383.	Admissions.	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers	4,703	55	73·680	1·169
Cholera	123	27	1·926	21·951
Diarrhœa	426	14	6·673	3·286
Dysenteria acuta	757	44	11·859	5·812
,, chronica	123	4	1·926	3·252
Hepatitis acuta	417	15	6·532	3·597
,, chronica	251	3	3·932	1·193
Catarrhus	156	5	2·443	3·205
Hæmoptysis	2	1	0·031	50·000
Asthma	8	1	0·125	12·500
Phthisis pulmonalis	5	2	0·078	40·000
Pneumonia	124	3	1·942	2·419
Apoplexia	17	12	0·266	70·588
Epilepsia	66	0	1·033	0·000
Paralysis	40	2	0·626	5·000
Amentia	4	1	0 062	25·000
Mania	22	1	0·344	4·545
Ebrietas	411	1	6 ·438	0·243
Delirium Tremens	83	1	1·300	1·604
Anasarca	20	2	0·313	10·000
Ascites	19	6	0·297	31·578
Rheumatismus acutus	656	4	10·277	0·609
,, chronicus	402	7	6·297	1·741
Syphilis &c	1956	9	30·643	0·460
Morbi oculorum	131	0	2·052	0·000
,, cutis	40	0	0·626	0·000
Other diseases	3,610	32	56 556	0·886
Total	14,572	252	228·293	1·729

Note.—Per centage of deaths to strength, 3·947.

No. 12.—*Table exhibiting the number of admissions and deaths, in the European foot artillery at Kamptee, from* 1829 *to* 1839 *inclusive.*

Aggregate strength. 2179.	Admissions	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers	1050	14	48 ·187	1 ·333
Cholera	18	10	0 ·826	55 ·555
Diarrhœa	193	4	8 ·857	2 ·073
Dysenteria acuta	280	11	12 ·849	3 ·928
,, chronica	1	0	0 ·045	0 ·000
Hepatitis acuta	266	8	12 ·207	3 ·007
,, chronica	9	1	0 ·413	11 ·111
Catarrhus	84	0	3 ·854	0 ·000
Hæmoptysis	3	0	0 ·137	0 ·000
Asthma	7	0	0 ·321	0 ·000
Phthisis pulmonalis	0	0	0	0
Pneumonia	41	0	1 ·881	0 ·000
Apoplexia	5	4	0 ·229	80 ·000
Epilepsia	8	0	0 ·367	0 ·000
Paralysis	5	0	0 ·229	0 ·000
Amentia	2	0	0 ·091	0 ·000
Mania	2	0	0 ·091	0 ·000
Ebrietas	499	3	22 ·900	0 ·601
Delirium Tremens	110	2	5 ·048	1 ·818
Anasarca	16	0	0 ·734	0 ·000
Ascites	0	0	0	0
Rheumatismus acutus	296	4	13 ·584	1 ·351
,, chronicus	61	1	2 ·799	1 ·639
Syphilis &c.	593	2	27 ·214	0 ·337
Morbi oculorum	45	0	2 ·065	0 ·000
,, cutis	6	0	0 ·275	0 ·000
Other diseases	1115	7	51 ·170	0 ·627
Total	4,715	71	216 ·383	1 ·558

NOTE.—Per centage of deaths to strength, 3·258.

No. 13.—*Table exhibiting the number of admissions and deaths, in the European horse artillery at Kamptee, from* 1829 *to* 1839, *inclusive.*

Aggregate strength 1210.	Admissions.	Deaths.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers	1037	18	83·629	1·735
Cholera	14	3	1·112	21·428
Diarrhœa	118	1	9·516	0·847
Dysenteria acuta	151	8	12·177	5·298
,, chronica	0	0	0	0
Hepatitis acuta	203	4	16·370	1·970
,, chronica	5	0	0·403	0·000
Catarrhus	23	0	1·854	0·000
Hæmoptysis	0	0	0	0
Asthma	1	0	0·080	0·000
Phthisis pulmonalis	1	0	0·080	0·000
Pneumonia	32	0	2·580	0·000
Apoplexia	2	2	0·161	100·000
Epilepsia	3	0	0·241	0·000
Paralysis	11	0	0·887	0·000
Amentia	4	1	0·322	25·000
Mania	0	0	0	0
Ebrietas	55	0	4·435	0·000
Delirium Tremens	25	0	2·016	0·000
Anasarca	1	0	0·080	0·000
Ascites	7	0	0·564	0·000
Rheumatismus acutus,	193	0	15·564	0·000
,, chronicus	22	0	1·774	0·000
Syphilis &c.	358	0	28·869	0·000
Morbi oculorum	36	0	2·903	0·000
,, Cutis	5	0	0·403	0·000
Other diseases	795	2	64·112	0·251
Total..	3102	39	250·161	1·257

NOTE.—Per centage of deaths to strength, 3·145.

Meteorological Observations, made at Secunderabad in 1843.

	Barometer.			Thermometer.				Amount of rain.	Number of days on which rain has fallen.	Prevailing Winds.
	Mean Maxim.	Mean Minim.	General Mean.	Mean Maxim.	Mean Minim.	General Mean.	Meam daily range.	Inches.	Days.	
January	28·41	28·40	28·40	76·2	57·2	66·6	19	0·25	1	N. E. N. S. E. & N. E. W.
February	28·42	28·37	28·39	80·2	59·3	69·7	21	0·05	1	N. E. S. S. E.
March	28·38	28·35	28·37	81·3	65·4	73·3	15·9	5·40	10	S.E. N. E.
April	28·37	28·33	28·35	88·5	69·9	79·2	18·6	0·30	2	S. E. E.
May	28·25	28·25	28·25	91·2	72·9	82·0	18·3	11·25	8	S. E.
June	28·13	28·12	28·13	90·9	70·4	80·6	20·5	0	0	W.
July	28·12	28·11	28·12	78·7	68·3	73·5	10·4	8·60	12	W.
August	28·19	28·16	28·17	80·1	67·2	73·6	12·9	7·39	13	S.
September	28·26	28·25	28·25	87·9	80·3	84·1	7·6	4·80	6	N. W.
October	28·34	28·29	28·31	78·9	65·1	72	13·8	5 ·2	6	E. & N. E.
November	28·41	28·38	28·39	76·1	54·2	65·1	21·9	0 ·0	0	E. N. E.
December	28·44	28·39	28·41	71·1	49	60	22·1	0·20	3	E. N. E.

Meteorological Observations, made at Kamptee in 1843.

	Thermometer.				Amount of rain.	Number of days on which rain has fallen.	Prevailing Winds.	
	Mean Maxim.	Mean Minim.	General Mean.	Mean daily range.	Inches.	Days.	A. M.	P. M.
January	80·1	63·6	71·9	16·4	4·25	2	N.	N. E.
February	87·7	64·6	76·1	23·9	0	0	N. E.	E.
March	86·1	70·2	78·1	15·8	2·20	7	E.	N. W.
April	100·6	75	88	25·2	0	0	W.	W.
May	103·0	83·4	93·2	19·5	0·30	3	W.	S. W.
June	100·5	68·4	84·4	32	0·75	6	W.	W.
July	82·9	75·6	79·2	7·3	18·80	24	S. W.	S. W.
August	86·5	77·6	82·1	8·7	4·55	10	W.	W.
September	89·6	75	82·3	14·6	7·35	5	W.	W.
October	89·8	72	80·9	17·8	3·40	4	N. E.	N. E.
November	85·7	60·9	73·3	24·8	0	0	N. W.	W.
December	81·1	48·5	64·8	32·6	0	0	W.	N. E.

TENASSERIM PROVINCES.

General description. The Tenasserim provinces, which include the districts of Amherst, Tavoy and Mergui, were ceded to the East India Company by the treaty of Yandaboo, at the conclusion of the Burmese war, in 1826.

These districts comprise a tract of country upwards of 250 miles in length, lying along the eastern coast of the bay of Bengal, and south of the kingdom of Pegue; the breadth however is inconsiderable, and imperfectly defined, but may be stated as varying, from 25 to 50 miles.

Boundaries, &c. They are bounded on the north by Pegue, from which they are separated by the Martaban or Salween river; on the east lies the country of Siam, separated by lofty ranges of mountains, running from north to south, nearly parallel with the coast, at a distance of from 30 to 40 miles inland, though approaching nearer to the sea at the southern extremity. On the south they adjoin lower Siam, and the Malayan peninsula;— and the entire of the western face is washed by the bay of Bengal, a chain of islands, called the Mergui archipelago, lying along the coast, distant from 15 to 30 miles.

General aspect of the country. The entire face of the country is mountainous, and covered with dense jungle to the tops of the highest peaks;—and it is but thinly inhabited. There are no roads, or even foot paths of any extent to be found, all communications being kept up by water, and villages are only to be met with on the banks of the principal rivers, such as the Salween, Gyne, Attaran, and the Tavoy river, and some others of less importance.

The geological features of the country have been as yet but imperfectly explored, some remarks however on this subject

will be found in the particular description of each of the provinces, as far as the subject has been investigated.

Population.

The original inhabitants are a tribe of Burmese, who have from time to time, been under different rulers, having been conquered both by the Peguese and Siamese; —but since the provinces came into the possession of the East India Company, numbers of Chinese, as well as natives of Burmah proper, have settled at Moulmein, where a mixed population, consisting of various castes of people from India, with a numerous and increasing race of Burmo-britons, and Burmo-chinese, is now to be found. The population in 1839, was as follows:—

Town and District.	Houses.	Males.	Females.	Burmese and Taliens.	Siamese.	Chinese.	Malays.	Kayens and Toung-thoos.	Natives of India.	Miscellaneous.
Moulmein Town	2565	8789	8253	14397	0	540	75	0	2012	0
Do. District including Amherst	6609	21298	20511	31227	0	105	5	10353	119	0
Tavoy Town	1953	5206	5284	9523	0	584	53	0	328	0
Do. District	4756	12520	12702	23473	26	54	50	1616	3	0
Mergui Town	1358	3764	3641	6871	23	180	15	3	55	258
Do. District	1723	5389	5068	6751	1376	34	337	1531	0	428
Total	18,964	56,966	55,459	92,242	1425	1497	1533	13,503	2517	686

Animals, wild and domestic.

The domestic animals to be met with on this coast, are almost limited to the buffalo, pig and the pariah dog—neither sheep,—black cattle, nor horses being bred;—poultry, of various kinds, is however abundant.

Of wild animals the principal are the royal tiger, elephant, cheeta, bear, wild hog, and several different species of deer. Of birds there are pea-fowl, a species of pheasant, jungle fowl and snipe, in great abundance at certain seasons of the year. Several of the mamalia and birds however, common to India, such as sheep, oxen, hares, jackalls, foxes, partridges, &c. are not to be found, the extreme moisture of the climate, appearing to be inimical to them; and both sheep and oxen soon get out of condition, even with the greatest care and attention.

Exports.

The chief exports of the provinces consist of teak-wood, rice, hides, horns, elephant's teeth, tin, bird's* nests, betel nut, cardamoms and bee's wax.

* Edible nests for the Chinese market.

Teak-wood. Extensive forests of teak-wood of the largest size, are to be found along the entire of the coast, and a valuable trade in timber, is carried on at Moulmein;—large establishments, at which numbers of elephants are employed, being kept up in the interior of the country, for the purpose of felling and preparing the timber, from whence it is floated down by the rivers.

Ship building. Several ship building establisments, are in full operation, on the banks of the Salween river—the principal of which are at a place called Namoo, distant eight miles, and at Tavoy-zoo, three miles below Moulmein; and vessels of beautiful structure, and of 4 or 500 tons burden, are always in progress at these places. Considerable quantities of teak-wood have also, of late, been sent direct to England.

Military stations. The principal stations in the provinces are Moulmein, or Maulmein the head quarters of the force, nearly opposite to the burmese town of Martaban, on the Salween river—Amherst a station for a company of native troops, at the mouth of the river, 28 miles below Moulmein;—Tavoy 150 miles south of Amherst, on the coast; and Mergui about 100 miles south of the latter place.

The approach to the Tenasserim coast from the sea, is highly picturesque, forming an outline of chains of irregular hills, to the northward and eastward; and although the low land on the Rangoon shore, is not visible, ranges of hills are seen to stretch from north-west to south-east, in the back ground:—and present a bold undulating appearance.

The small town of Amherst lies at the mouth of the Martaban river, on a point of land running out to the north-west, after passing which, the view along the river becomes dreary, the banks possessing but little interest, and the few villages and huts to be seen, having a wretched appearance. The jungle approaches close to the slimy banks, and except a few canoes, to be seen here and there, either crossing the stream, or stealing along the shore, there is no appearance

of life, until arriving off the ship building station of Namoo, situated on a small promontory on the right bank of the river, where it forms a bay.

A few miles further up the stream, on the opposite side, is the village of Tavoy-zoo, and which may now be said to form the commencement of the town of Moulmein.

Ships anchor immediately off the town, but owing to a high embankment intercepting the view, the military cantonment, cannot be seen from the river.

Station of Moulmein. Moulmein, lying in north latitude 16° 3°, and east longitude 97° 38″, is situated on a bend of the river. Formerly there was a populous walled town, on the site of the present cantonment, and the remains of the wall are still to be seen, forming the bounds of the military station, and separating it on the west and north sides, from the native town, which extends along the edge of the river, for about two miles and a half, most of the houses are built on posts, on the bank of the river, and over ravines, with the water flowing under them.

On the east side, a hilly ridge rises from the north angle, extending southward, and on the highest part at the south-east angle, it is surmounted with a large burmese pyramidal temple, adorned with gilding, and filled with numbers of colossal statues of idols, the principal building being surrounded by a number of small pagodas, of various dimensions.

The height of the ridge at this part is about 124 feet above the level of the cantonment. It stretches southward for several miles, and a road leads along the summit, on every high point of which, is a temple. The officers houses are built on the western slope, and at the base of this ridge, and in front of them are the barracks, and the parade ground.

Military cantonment. The distance, from the foot of the hill, to the river, is about half a mile, and from right to left of the cantonment, the ground forms a series of gentle sweeps.

Madras Lith. Press

PLAN OF MOULMYNE.

The remains of an old fort, a work of great labour are here to be traced, forming an oblong, of about a mile in length, and rather under half a mile in breadth. On its eastern side, is the range of hills, the opposite side terminating almost in the river, is protected by a double ditch; within this space are the lines of the artillery, the European regiment, and one native infantry corps, with the commissariat and other stores. The roads throughout the cantonment, are in excellent order, and the intermediate spaces, not built upon, form a beautiful green sward.

Old fort. The fort is considered by some, to be the work of the Portuguese, but it may with more probability, be supposed to have been the capital, or strong hold, of the Taliens, by which people the country was held about two hundred years ago.

Jail. Outside of the fort, the ground descends, and a little to the west is the jail, a large enclosed building, capable of containing from 12 to 1400 prisoners; and on the crest of a small rising ground, are the lines of the Talien corps, a local battalion, officered by Europeans.

The houses are all constructed of wood, raised on posts, and thatched with the leaves of the Neepa-palm.

The ground on which the barracks and hospitals are situated, is of a sandy nature, and slopes towards the river, so that the rain quickly runs off, or becomes absorbed.

For eight months in the year, the surface is covered with grass, but during the other four, it is dried up, and brown.

A dense jungle covered the cantonment, when it was first occupied by the British, in 1826, but when clearing it many large trees were left standing, which contribute much to the beauty of the scenery.

The river, opposite the town, is about a mile wide, and is navigable for vessels drawing 12 feet water. The tide rising 18 feet at the springs. The water is fresh in the rainy season

but always turbid, at other times it is brackish. The shores are generally muddy, and there are sand-banks and mud flats, opposite the station, visible at low tides.

Native Town. The native town, built along the river, is chiefly composed of bamboo houses, erected on posts and thatched. These dwellings are generally spacious and airy, but the ground beneath, is often muddy and overflowed by the tide. The principal street however, is well raised and dry, and kept clean. To avoid the danger of fires in hot weather, the thatch is stripped off, but this has not prevented sudden and extensive conflagrations.

The adjacent country, in the north-east direction, consists of extensive alluvial plains, intersected by three great rivers, the Salween, Gyne, and Attaran, and by numerous creeks, and belts of jungle. The plains are mostly uncultivated, covered with coarse grass, and are overflowed at spring tides, and also in the rainy season. Several abrupt crags rise in them almost perpendicularly ; and their altitude is considerable, that at Trokla, which forms a most picturesque object, has been ascertained to be 2600 feet. They are chiefly composed of limestone, and caves are found in many of them, some of which pass completely through the hills, forming extensive tunnels, appropriated to religious purposes. To the south-east the country is hilly, and covered with jungle, some plains of limited extent intervening ; the hills are of moderate height, and of a rounded form ; they are composed of sandstone, and in one of them, a vein of sulphuret of antimony has been found.

Hot wells. Near the old town of Attaran, there are several hot springs, the temperature of which has been found to be 136° of Far ; the water is tasteless, but deposits a calcarious crust, containing carbonate of iron.

Isle of monsters. In the south-west direction, is the island of Baloogeoun, or "the isle of monsters", in the rich alluvial plains of which, much rice is cultivated, the crops yielding 120 fold.

Buffaloes, of a large and fine breed, are used for agricultural labour, and are sufficiently numerous for the wants of the people ;—these animals require no care, are never housed, and have always abundance of pasturage in the marshy grounds ;—the natives of the country never use their milk, a universal prejudice existing against it as an article of food.

On the north bank of the river, is an open passage to the sea, wide but shallow, and only navigable for boats ; the sea breeze, which blows through it in the hot months, is cool and pleasant.

Province of Martaban

To the north of this channel, is the district of Martaban, belonging to the burmese ; It is generally mountainous covered with jungle, and is said to be very unhealthy. The summits of the hills, are crowned with numerous pyramidal temples, which, when viewed across the broad expanded waters, form a scene of great beauty, not equalled by any thing to be seen in India, unless perhaps the harbour of Bombay.

Interior of the district.

It is stated by persons who have explored the rivers, that the Attaran, which winds to the south east, leads into dense teak forests, and a totally uninhabited country ; that, about 60 miles from Moulmein, the river is narrow, with banks from 30 to 40 feet high, which with the thick foliage, almost shut out the light of day. The river Gyne leads through a more open country, passing through-plains, and along its banks are a considerable number of villages. This river, is navigable for small boats for 180 miles into the interior, and along its banks, at the most distant point, are to be found the finest teak forests.

Teak forest.

With the exception of the few villages met with on the banks of the river, the whole interior is a complete wilderness, destitute of inhabitants ;—there are generally about two hundred men employed in the forest felling wood, and preparing it for rafts, to be floated down the river. The process adopted, is to kill the tree by barking it

all round, three years previous to its being felled; during this period the wood becomes dry, and light enough to be floated, which the recently cut tree is not. The unfair traders however, dry the fresh cut trees, by burning them at one end, but, the timber so prepared is considered to be of inferior quality. To convey it to the waters edge, the assistance of elephants is necessary; and those who from want of capital are unable to procure these useful animals, are obliged to cut the logs into short lengths, for the facility of transport. Wood, the produce of the lower part of the country, does not appear to be of much value, as an article of commerce.

Geology. Stratified sandstone is the prevailing rock throughout the district, having a dip to the north-east, as may be seen along the ridge of hills, southward of the pagoda of Moulmein. It is intersected with veins of quartz, and crystals of great brilliancy, are found in the interstices, which are formed by the burmese, into mock diamonds, like the Bristol stones.

Vesicular iron stone or tufa, is the next most prevalent rock formation. It is the same as that, which is found on the coast of Malabar, called "laterite," and appears on the surface in several places, forming a good material for roads.

Below the rocks, bituminous schale is found, in digging wells, some of which would serve for crayons and is used by the Siamese, for writing upon coarse white paper.

No granite is seen in the neighbourhood, but at Amherst harbour, there is a reef of granite rocks, which is covered by the tide, but is bare at low water. Pipe clay is dug up from between strata of sandstone, and is of that description used by soldiers, for cleaning their belts. Limestone is obtained readily from the crags, in the plains to the north-east, and it is well adapted for the purposes of building, and may be brought down at little expense, by boats or rafts, from Damath and Cogoon.

The soil in the cantonment, is light, sandy and answers pretty well for gardening, but requires abundance of manure: and

European vegetables are successfully cultivated, during the cold months.

Climate. The year is divided, according to the natives, into three seasons; the cold from November to March, the hot from March to July, and the rainy season from July to November; but the rains generally begin about the end of April, and moderate a part of the hot season.

After the vernal equinox, southerly winds, which are loaded with watery vapour, prevail, and continue to blow, varying from south to south-west, till the autumnal equinox sets in. During this season the air is clear and transparent, and the sun's rays are so very powerful, that men accustomed to exposure in the Carnatic, cannot bear it here. The natives even, generally use umbrellas.

The vapours accumulating, soon however, form into clouds, and intercept the sun's rays, and after the month of May, it very seldom shines out, till the end of the rainy season.

During this time, the air is so loaded with moisture, that furniture becomes mouldy, the glue, as also the binding of books give way, iron attracts rust with rapidity, and seeds lose their vegetating properties, unless kept in bottles closely stopped. The barometer at this season seldom rises above 30 inches, and usually ranges within two tenths below that point; and the rain falls in torrents, accompanied with thunder, particularly at the commencement and ending, of the south-west monsoon.

Record of the Pluviometer at Moulmein.

MONTHS.	1829	1830	1831	1832	1834	1836	1837	1838	1839	1840	1841	1842	1843	Average fall in each month for 12 years.
January	0	0	0	It rained on 126 days, and there fell 180 inches.	0	0	0	0	0	0	0	0	0	0
February	0	0	0		0	0	0	0	0	0	0·15	0·30	0	0·03
March	0	1·03	0		0	0	0	1·80	0	0	0	0	0	0·23
April	3·41	1·32	0		0	0	0	3·45	2·87	1·90	0	0·80	0	1·14
May	5·21	6·39	13·00		22·00	29·00	33·25	15·32	23·61	19·61	18·40	11·10	13·40	17·52
June	24·57	16·38	28.35		57·00	36·00	15·93	39·36	35·69	30·10	44·80	52·50	32·10	34.39
July	31·66	31·12	42·03		46·00	23·50	44·36	59·07	56·82	54·79	57·80	55·10	34·45	41·85
August	39·72	20·34	23·33		42·00	37·00	63·64	62·11	24·32	46·91	26·55	24·60	39·10	37·46
September	27·63	27·93	22·49		44·00	30·12	26·00	39·95	23·20	16·10	20·40	40·20	26.97	28·74
October	0	2·13	10·55		7·50	14·50	13·27	5·83	13·18	12·90	2·21	6·60	2·00	7·58
November	0	5·19	1·90		0	7·00	6·14	3·10	1·50	2·10	0·80	1·00	0·50	2·43
December	0	1·02	0		0	0	0	0	0	0	1·95	0	1·60	0·36
Total	132·20	113·15	141·65	180·00	218·50	177·12	202·59	229.99	181·19	184·41	173·06	192·20	150·12	189·68

After the autumnal equinox, variable winds and sultry weather prevail, for four or five weeks, until the north-east wind sets in, which it generally does after the first week of November, when the atmosphere becomes dry, and hazy. The evaporation of water, in an earthern pot, at this time, sinks the thermometer from 16° to 20° below the temperature of the air ; the barometer stands above 30 inches, and varies from that to 30.2. The sun's rays be-

come much less powerful, and fogs are frequent in the mornings, clearing up at 9 or 10 o'clock.

Bazaar supplies. The bazaar supplies are abundant, and generally good; and the soldiers are victualled by the commissariat. Excellent bread is made from Ava wheat; beef the usual animal food, is tolerably good; the cattle being brought from the country of the Shans, lying to the eastward, they are too small for draught purposes, but the flesh is of good quality.

Venison is generally procurable in the market, as also pork, fowls, ducks, turtle's-eggs, fish, prawns, and mætha, or dried meat, cured by the hunters, in long shreds;—several of the country vegetables common in India, are to be had, and also a great variety of wild herbs and fruits, particularly the acid sorts, which are prized by the burmese, as correcting the putrescent qualities of napee, the usual condiment eaten with rice.*

Rice. Rice is here always kept in the husk, and is beaten out as required for use, in this way it is better preserved from damp, mouldiness and weevils.

The sheep are all imported, and require much care, particularly during the rains, when unless kept on boarded floors, they die in great numbers.

The price of a good gram fed sheep, varies from 12 to 20 rupees.

Goats appear to thrive somewhat better than sheep, but are not always procurable; and if the long legged black goat of India, was introduced in sufficient numbers, so as to be within the sepoys means, it would be a great desideratum.

Pigs are reared by the chinese,—poultry, which are abundant in the wild state, are domesticated by the kareens, and burmese; and ducks and geese, which thrive well, and are principally imported from Rangoon.

* Napee is made either of shrimps, which is the best sort, or of small fish in a half putrid state.

The forests, particularly on the banks of the river Gyne, abound with deer and wild hog, from whence they are brought to the market.

The only kinds of fish to be found in the market, are those taken in the river, as the cockup, which grows to a great size, the murrell, the mangoe fish, with several species of prawns and cray fish.

Fruit and vegetables. Gourds, pumpkins, plantains, water-melons and sweet-potatoes, are to be had in abundance; among fruits, is the pine apple, from June to August, small mangoes, oranges, guavas, with some wild fruits peculiar to the country. Rice is usually cheap, but many other articles of ordinary consumption, such as d'hall, ghee, pepper, chillies, cocoanuts, and even tobacco, are imported. The betel nut is exposed for sale, in its fresh state, covered with the husk.

Manufactures. The chief articles of native manufacture, consist of silk and cotton cloths, and the former though of coarse texture, are much prized on account of their durability, and the beauty of their colours. Lackered boxes, in considerable variety, and daws or large knives, which are used both for domestic purposes and as instruments of war, carved cocoanut shells and ivory ornaments, such as handles of knives, &c. are also manufactured; and the principal native merchants deal in precious stones, such as rubies, diamonds, and sapphires, brought from the eastern parts of Ava and Siam; they are however exorbitantly dear, the prices usually asked for them, being much above their intrinsic value.

Natives of India, soon become addicted to intemperance in this country, being in a great degree loosed from the restraints of caste; Europeans also, appear to obtain spirits with greater facility, than at most Indian stations.

Water. The water used by the troops, is taken from wells, in different parts of the cantonment, the best being on the parade ground. The supply is abundant and good, even in the driest weather, though some of the wells fail at that time. The depth from the surface, varies from 20 to 30

feet, according to situation, and the season of the year. Ships occasionally procure their water by boats, which ascend the Salween river, as far as the tide will carry them, where they find it fresh and clear.

Manners and customs of the inhabitants.

The native inhabitants of this province, are divided into three classes, the Kareens who appear to be the aborigines, the Taliens, and the Burmese. They are all of short stature, but of a robust make, though a marked difference,both in the expression of the countenance, and conformation of the body, may be observed in them ; the Kareens are less muscular than the Taliens, while the prominence of the nasal and malar bones, approximates more to the European countenance.

In colour all classes of the inhabitants are of a light bamboo, none are black, and the women are usually much fairer than the men. The young men have their beards, and hair on the breast, carefully pulled out ; but that on the head is long, and of a jet black. They soon become old looking, few are long lived, and a man of 45 or 50, is said to be aged ; although some are to be found, of 90 years.

The burmese are an indolent vain race, and from their wants being few, and the price of labour high,they only work so as to procure the simple necessaries of life. The expenses of a family do not exceed three rupees a month, and it is not an uncommon thing, for those who have procured a sum of money, to remain idle whilst it lasts, amusing themselves with the sports of the country. They are principally engaged as sawyers, and labourers about the docks ; and few, or none, enter into commercial speculations.

They eat almost every thing in the way of food, but, their general diet consists of vegetables, with condiments, and the preparation of fish called "*Napee*" or "*Balashang* ;" their religion forbids them to shed blood, but any animal, from the elephant downward, which dies, is immediately cut up and eaten, without reference either to the description of animal, or to the disease of which it may have died ; fish is much used by them, as in its death, no blood is shed.

Marriages. Judging from the number of children to be seen, they must be considered a prolific race; marriage is a civil contract, easily broken, and no disgrace is incurred by the separation of man and wife, and their contracting new domestic engagements; like all eastern nations they marry young.

Dress. The dress is gaudy, that of the men consists of a plaid, of cotton cloth, wrapt round the loins, much like the hindoos, but one end of it is thrown over the shoulder; their dress on occasions of festivals, is a silken plaid, of bright red and yellow colours, and the head is generally ornamented with a gaudy coloured handkerchief, the hair being worn tied into a knot, on one side.

The dress of the women consists of a narrow petticoat, open in front, and secured about the loins, and under the arm pits; it passes across the bosom, but the shoulders are left bare, and it is of such narrow dimensions in front, that at every step, the knee and lower part of the thigh are exposed; when engaged in domestic occupations, the bosom in elderly females is exposed, but that of the young female is invariably covered—They also frequently wear a loose jacket, reaching to the hips; most of the women have silk clothes, for festival occasions, but the upper part, which covers the bosom, is always of red cotton.

Although subject to the British for nearly 20 years, the energies of the people have been turned to no practical account, for they neither take employment as sailors, nor soldiers, save a few Taliens, who often desert their corps. A few are employed as peons, and mahouts, by the commissariat, but the bulk of the labouring community, are either natives of Bengal or Madras. The burmese enjoy our protection, but give little in return.

The men are all tattooed, with a dark blue pigment, from the loins to below the knee, and the operation is performed with considerable skill, giving the appearance of the person wearing dark lower garments; some are also tattooed over the shoulders, with a red pigment. The women are never tattooed.

The poorest of the burmese have curtains to defend them from the attacks of mosquitoes, from which they seem to suffer as much as strangers, these insects being extremely troublesome throughout the rainy season.

Use of Tobacco and opium

The practice of smoking tobacco is universal, from the child to the most aged person. Opium is also used, but not in great quantity, except by the chinese, it being considered a disreputable habit; and the name of opium eater and thief, are synonymous in the language of the country.

Disease of the natives.

Rheumatism is the most common of the diseases seen, but it is not of great severity.

Bronchocele.

In the highlands both of Siam and Ava, bronchocele is frequent, but the enlarged gland does not attain any great size, nor is it accompanied by cretenism ; it is attributed to the quality of the water by some, and by others to the use of earth salt.

Small pox.

Small pox, has been a dreadful scourge to this country, and inoculation is practised to a considerable extent, to lessen its severity. In the treatment, the burmese keep the patients cool, and water is sprinkled over the body occasionally; in Siam the patient is bathed several times a day in cold water, from the time the eruption first makes its appearance.

Vaccination failure of

All attempts at permanently establishing vaccination have failed, in consequence of the extreme dampness of the climate, destroying the specific qualities of the virus, to transport and preserve which, every possible expedient that could be thought of, has been tried.

Cholera.

Cholera has occasioned great mortality from time to time, in some districts; in 1824 and 25 it raged with great violence in the burmese army above Prome ; and sporadic cases occur annually.

Unhealthy seasons of the year

The periods considered most unhealthy by the natives, are the commencement and termination of the

rains in May and October, particularly the latter, when fevers are common in the inland villages, and in the forests; and in 1839, nearly all the wood cutters were obliged to come into Moulmein, on account of fever. The intermittent is the usual form of the disease, though remittents, and even continued fevers, are not unknown.

Frambœsia. Frambœsia, or the yaws, is not uncommon among the native population, and is called by them "tongo ana." It is classed with venereal affections, and considered infectious. The remedy chiefly relied on for its cure, is the smilax china.

Aphtha. Aphtha, and inflammation of the tongue and fauces, extending to the stomach and intestines, are not uncommon, and prove obstinate and intractable.

Trismus nascentium. Infants, in the cold season, are subject to trismus, which carries off many of them, but after they are a few months old, they are usually healthy, and thrive well.

Leprosy. Lepra is of frequent occurrence, both among the burmese and chinese. It is divided into ten varieties, all of which are considered contagious, and the subjects of it are obliged to live apart from the rest of the community.

Absence of Hydrophobia. Hydrophobia, is said, never to have been known on the Tennasserim coast, or indeed on any part of the Malayan peninsula. At Rangoon however it does occur, and a cure is reported as having been performed there, by an old priest, who prescribed tobacco and stramonium in large doses; on a late enquiry however, it was found that the priest was dead, and that the monastery in which he lived, had been burnt with all his records. The truth of the statement was however confirmed by respectable authorities, and is on that account noticed here.

Diseases of Cattle. The warm season of 1839, was considered unusually hot, and the cattle which came from the Shan counrty in March, brought with them a disease which spread

extensively at Moulmein, and proved exceedingly destructive.

It usually commenced its attack in a most insiduous manner, and to the inexperienced eye was not obvious, at first the animal appeared dull, the clefts of the hoofs were seen to swell, and the heels to become spongy, next the breath was observed to be offensive, and the gums spongy, with a frothy discharge issuing from the mouth. At this stage, the feet are so much swollen, that the animal can hardly walk, and it gradually becomes emaciated, being prevented from feeding, by the state of the mouth—The bowels were generally confined, and the circulation quickened ; and the disease usually proved fatal, in 'about three weeks from its first commencement.—From 7 to 800 head of cattle, died during the year.

Several " post mortem" examinations were made, and except in a few instances, in which there was ulceration and softening, of the mucous membrane of the stomach, the principal morbid appearance, was inflammation of the lungs.

Diseases of Elephants, In this year also, an extensive mortality occurred amongst the government elephants, which commenced in June, after the other epidemic had ceased, though the elephants throughout the provinces were dying in great numbers, a short time previous thereto. " Post mortem" examinations showed, that this disease was also an affection of the lungs, which were seen in various stages of congestion, and inflammation.

In one case suppuration was present, in another tuberculous deposits existed, and generally, one side of the chest only was affected, the other being healthy ; in those who died at its first outbreak, the lungs were black throughout their whole substance, and resembled the spleen in structure, and when cut into, a frothy purulent matter exuded. The liver was always healthy, but the spleen was found to be soft, and engorged with blood.

The symptoms observed in this disease, are very indistinct, the animals continue to eat their food to the last, when they suddenly fall down and die; and they perform their work till within an hour of death.—One animal apparently in good health, on going out to the farm, suddenly fell down and died in half an hour, and another when bringing in forage, died in the same sudden manner.

Military force. The troops consist of one Queen's regiment of foot, two regiments of Madras native infantry, one company of European artillery, and a local baltation called the Talien corps, the whole being under the command of a Brigadier.

European barracks. The European infantry barracks, erected in 1827, are built in open column of ranges, ten in number, running north and south, having a space of 45 feet between each; they afford sufficient accommodation for a complete corps, each range being calculated for 80 men. They are constructed of teak wood, and raised on piles three feet from the ground, with boarded floors, and are thatched with the Neepa palm; each range is 100feet in length, by 25½ in breadth, and 11 feet 9 inches in height, with an open verandah 12 feet broad all round;—there are two doors, and eight unglazed windows with wooden shutters, on each side, and one door and two windows, in each end,—besides which the lower plank in the walls, is on hinges opening outwards, thereby affording ample means of ventilation.

Hospital. The hospital is situated, within a few minutes walk of the barracks, on the north-east side, the locality is objectionable in some respects, the ground being rather confined, and lying between two public roads, which are only shut out by a wooden fence.—It consists of three ranges of, buildings, and a ward for the women and children, a surgery, medical stores, serjeants quarters, dead house &c. the whole, enclosed in an oblong square,measuring 395 by 265 feet, and surrounded by a teak palisading, 9 feet high.—The length of each range is 100 feet, the breadth 19 feet 4 inches; and the height of the walls 9 feet 4 inches; —having four doors, and

fourteen unglazed windows, with wooden shutters in each, with an open verandah 6 feet broad all round, they are constructed in a similar manner as the barracks, each ward is capable of containing 36 patients, allowing five feet for each.— The same means of ventilation are adopted as in the barracks.

The privies belonging to the barracks, are situated too near the cook-rooms, they consist of a deep trench with wooden seats, those of the hospital are connected by covered ways, leading from the verandahs;—every attention is paid to cleanliness, and quick lime is constantly thrown into them.

Artillery lines and barracks.

The artillery lines and barracks, are perhaps more eligibly placed, than those of any other corps at this station, they face an open grassy esplanade, of considerable extent, bounded by the low mound, the remains of the fort, and a line of houses, which runs along the bank of the river, as it sweeps round the north west angle of the cantonment,

Hospital.

The hospital is at a short and convenient distance from the lines, and possesses all the advantages, of an airy, commodious, edifice, constructed like the other public buildings; it can accommodate 30 Europeans, and 50 natives, exclusive of a ward for women and children.

Native lines at Tavoyzoo.

The lines of one of the native corps, are situated near Tavoyzoo, half a mile from the village of the same name, and two and a half miles east of the fort, a range of high hills, covered with low jungle, running immediately in their rear. The ground selected for the huts, is elevated and dry, the soil being chiefly laterite, but in the lower situations, it is a tenacious chalky loam; abundance of good and wholesome water is obtained from wells, and from natural reservoirs formed by the hill streams.—Previous to 1838, it was a complete jungle, but has since been cleared, and good roads leading to the fort and bazaar, have been made; stone bridges have also been erected where required. There is a small bazaar in the lines, and another at the village, in the vicinity.

Sepoys lines.

The huts for the sepoys are in lines, each hut being 18 feet by 12, and intended to accommodate 7 or 8 inmates;

they are not raised from the ground, but the men sleep on bamboo frames, elevated 4 or 5 feet. These buildings are not considered as well suited to the climate, as those used by the natives of the country, which are all so well raised as to allow a free circulation of air underneath them, to carry off the damp exhalations arising from the ground.

The principal diseases of the sepoys, are caused by inattention to their food and comforts, as the men, from habits of penuriousness, deprive themselves of wholesome* food.

The baneful practice of opium eating, has also been known to exist, in some of the native corps, to a considerable extent.

Native lines in cantonment. The lines of the other Madras native corps, are within the limits of the old fort, not far from those of H. M.'s regiment, on elevated ground, near the base of the hills, and are very eligibly situated.

Diseases of the troops. The diseases most prevalent at Moulmein amongst the troops, are fever, dysentery, diarrhœa, hepatitis, ulcers, and rheumatism. Catarrhal and pulmonic complaints, also prevail at certain seasons; the sepoys are subject to atrophy, beriberi and dropsy; and some Europeans have been found to suffer from a scorbutic diathesis. There are generally between 4 and 5 per cent in hospital; the deaths are $3\frac{1}{2}$ per cent per annum in Europeans, and about $1\frac{1}{3}$ per cent in natives.

Fever. Fevers are most commonly of the class of intermittents, as might be expected from the vicinity of swampy plains, and jungles, and the muddy banks of a river overflowed by the tide, and exposed to the influence of a tropical sun. That fevers are not more frequent and severe, is perhaps attributable to the accommodation for the men being good, the situation of the cantonment being on sloping ground, which is of an absorbent nature, and the easterly winds being screened off by the hills.

Fevers have become milder, and less frequent every year, since the station was first occupied, showing that the effect

* They are now furnished with rations, and a great improvement in their health has in consequence taken place.

of clearing jungle is not experienced. till some years have elapsed.

The most severe cases have occurred at Baloogcoun island, in the teak forests; and, at Amherst harbour.

The men employed in cutting teak timber, suffer very much at the commencement of the rains, and when once attacked, are generally obliged to quit the forests for a time, as they do not recover whilst they remain there. When the rains have fairly set in, fever is less to be feared than at other times, and this is the season usually chosen for floating down timber rafts.

Dysentery. Dysentery and liver diseases are the most fatal complaints amongst Europeans ; and prisoners confined

Scurvy. in the solitary cells, generally men of dissipated habits, have suffered from a scorbutic diathesis; the subjects of this affection always require a removal from the climate, neither diet nor medicine being found of benefit, when once it has been established; and on this account, the punishment of solitary confinement, during the rainy season in particular, is unsuited to the climate.

The asthenic diseases, from which the native troops suffer, also require a speedy removal from this climate.

It is worthy of remark, that the prisoners, and public followers, not employed on night duties, are exempt from many of the low forms of disease, from which the troops suffer.

Scrophula. The climate is thought to be inimical to strumous diseases, and to complaints occurring in a scrofulous habit of body ; and glandular swellings, which run into suppuration, are very difficult to heal.

Pulmonary diseases. Pulmonary complaints were at one time thought to be very prevalent; and that a residence here was highly dangerous, for persons having a phthisical tendency, but this idea seems to be over-rated, as many circumstances are in favour of the consumptive ; such as the mildness of the climate,

the absence of hot winds, and the slight variation, in the daily range of temperature.

Ulcers.

Ulcers are difficult of cure during wet weather.

Hepatic diseases.

The climate is supposed to be unfavorable to hepatic complaints, and in a few instances this opinion has been borne out, but the cases were those of men, who were supposed to have previously laboured under organic disease of the liver.

The diseases have some reference to the seasons, viz., fevers prevail most, from the latter part of February till May; bowel complaints occur in the rains, particulary at their commencement; and pulmonary complaints during the cold season.

Health of the Hindoo and Mussulman residents.

The resident mussulman and hindoo inhabitants, appear to enjoy good health, and amongst the natives, there are few diseased persons to be seen, and no mendicants.

Health of Convicts.

In the jail for four years, the average deaths to strength, were as follows :

Years.			Mean Strength.	Died.	Proportion of death to strength.
1835	1st	Half year..........	540	11	1 in 49
	2d	do.	670	16	1 in 41
1836	1st	do.	750	14	1 in 67
	2d	do.	850	12	1 in 70
1837	1st	do.	890	17	1 in 52
	2d	do.	930	24	1 in 40
1838	1st	do.	1006	22	1 in 47
	2d	do.	1050	28	1 in 37
1839	1st	do.	1130	20	1 in 37
		Total....	7216	174	or 1 in 41,04

The above statement, includes men of all ages, many of whom are confined for life ; they are under strict discipline, are well fed, and not overworked. Each man is allowed a basket of rice, containing 54 lbs, and one rupee in cash, monthly, besides firewood, and the prisoners are divided into messes of 50. Each individual contributes 12 annas for bazaar expenses, the remaining 4 annas being expended as they please.—Breakfast consists of vegetable curry with rice, and dinner of d'holl curry, with fish occasionally.

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General Description and situation. The small station of Amherst, is situated on a narrow neck of land, at the mouth of the Martaban river, and is the extreme north-western point of the Tenasserim provinces.

A bold range of wooded hills, rises within a short distance, on the inland side of the town, leaving a limited space of level ground, but partially cleared of jungle,—between them and the sea on one side, and the river on the other.

Amherst is about 28 miles from Moulmein by the river, but the distance by land, is considerably less, there is however no road either for carriages, or cattle of any description, a path way running through swamps, and over rugged hills, being the only land communication, and this is only made use of on particular occasions, for foot runners, chiefly to convey intelligence to head quarters in hazy weather, of the arrival of ships off the river.

Troops. A detachment consisting of a company, from one of the native corps at Moulmein, under a subaltern officer, occupies the little town, the chief importance of which is, its

Pilot station being a convenient pilot station, no ships of any description, being able to proceed up the river, in consequence both, of the rapidity of the stream, and the danger arising from numerous banks and shoals, without an experienced pilot.

When the Tenasserim provinces were first ceded to the East India Company, in 1826, it was contemplated by

Sir, A. Campbell, Commander in Chief of the Rangoon expedition, to establish the head quarters of the British force at Amherst, the limited extent of open ground however, and also an apprehension that it might prove unhealthy, from the immediate proximity of hills covered with dense jungle, caused him to abandon the original intenion, and finally to select Moulmein; and as Amherst was for some time found to be very feverish, from May till near to the end of the year, or during the rainy season, it was considered fortunate that it was not made the head quarters of the provinces.

Much of the jungle in the immediate vicinity, has of late years been cleared away, and the station has consequently become more healthy, and during the hot and dry months, of February, March and April, it is now resorted to by invalids from Moulmein, as well for the benefit of change of air, as to enjoy the cool sea breeze, and salt water bathing. European soldiers are also frequently sent there, at the same season, and men suffering from chronic complaints, or general debility, the consequence of acute disease, are found to derive great benefit from the change.

Sugar cane Planters. A considerable part of the cleared land in the vicinity, is at present under sugar-cane plantations, a company of European merchants having established a manufactory at Amherst, where sugar of excellent quality is made for the Calcutta market; and the speculation is likely to turn out well, the soil and climate, being both favorable to the growth of the cane.

DISTRICT OF TAVOY.

General description. Tavoy lies between the districts of Moulmein and Mergui, being in length from north to south, about 140 miles, and in breadth about, 40 miles. It is very hilly throughout its whole extent, the hills, and also the valleys and plains, with few exceptions, being covered with dense jungle; the hills run in ridges, generally in the direction of north and south, separating the district, from

the country of Siam, and none of them exceed in elevation 4500 feet.

There is only one river of any importance in the district, called the Tenasserim river, it rises in the northern part, in latitude 14° 8″, and after a southerly course of about 70 miles, nearly parallel to the sea coast, and not very distant from it, enters the sea in north latitude 13° 30″. It is shallow, broad, has a rocky bed, and is full of islands and sand banks, and is not navigable for vessels of any size, for more than fifteen or twenty miles from its mouth. Small junks, and other craft of little burden, ascend as high as 30 miles, but not without difficulty; though the influence of the tide extends as high as 50 miles. Besides the Tenasserim river, which forms a portion of the eastern boundary of the district, there are also a few small and insignificant streams, of little use even for the purposes of irrigation.

The Tavoy valley, through which the river flows, is open to the south, bounded on the west by a range of hills extending along the sea coast, the highest of which attains an elevation of about 1800 feet; and on the east by a series of ranges, the most easterly of which are the highest. This valley, the principal situation in which rice is cultivated, is at its broadest part, a few miles above the mouth of the river, about 10 miles across, but becomes gradually narrower to the northward, until shut in by hills.

Geology. The principal geological formation of the district, is granitic. The hills along the sea coast, consist almost entirely of granite; on the east side of them, there is abundance of micaceous iron ore, and clay iron stone, a good deal of the former being magnetic; and there are extensive low rice grounds, along both banks of the river, the soil of which is chiefly stiff clay; the banks and bed of the river are also clayey, but occasionally a rocky stratum of laterite is seen. The first hilly undulations to the eastward, are composed of laterite, clay and sandstone: they gradually

increase in height, and are then believed to become granitic;—among these hill streams tin, in great abundance and of good quality, is found; hot springs are also found in different parts of the district.

Amongst the vegetable products, is much valuable timber of various kinds, and wood oil is obtained from a tree which is in great abundance. The *tse*, which makes an excellent black varnish, indestructible by moisture, is also a vegetable juice, caoutchouc trees are very numerous, and there are also a few gamboge trees; the fruits are various, and many of them of good kind. There are several kinds of rice, which yield their crops almost without labour; the fields being watered most plentifully by the rains.

But little fish is to be had either from the sea or rivers.

Climate.

The climate seems to agree as well with strangers, as with the natives of the province; and the changes which take place, are very gradual. The atmosphere is never close or oppressively hot; and the temperature throughout the year, is very equable, the annual mean being about 80° in the shade; and the greatest range of the thermometer, in the shade, about 30°;—the lowest observed temperature being 65°, the highest 95°. The mercury in the barometer fluctuates but little, its greatest range being $\frac{5}{10}$ of an inch; during the rains it is about 2 tenths lower, than in the dry months. The rainy season, which sets in either in April or May, is the pleasantest time of the year, and likewise the healthiest. The rains continue more or less heavy, until the latter end of September or October, and some years even till the middle of November; when a slight change takes place, and some sickness occurs, but the east wind soon sets in, bringing with it health and freshness. The wind is strong during the months of December and January, it then abates and alternates with the sea breeze, either from the north-west or west, until the south-west monsoon again brings its floods. The greatest quantity of rain measured in any one year, was 220

inches in 1838 ;—the fall of rain during the south-west monsoon in 1831, was as follows.

	Total of each month.	
	Inches.	Tenths.
May...................	23	3
June..................	36	4
July..................	51	4
August................	39	2
September.............	28	7
October...............	24	5

As regards internal communications, little can be said, there being no such thing as a road in the district, and the Tavoy river, affords the only means of intercourse.

The products of the country are principally rice, cotton, betel, ratans, and the fruit called the dorian.

The population is said to amount to about 50,000 souls, the greatest portion of whom, are distributed in straggling villages along the banks of the river, and in small creeks.

Tavoy, the chief town of the district, contains about 20,000 inhabitants, and is situated on the left bank of the river, 30 miles from the sea, in north latitude 14° 50″, and east longitude 98°. Its site is low, but slopes gently towards the river, by which all accumulations of stagnant or offensive matters are prevented. It includes an area of about three miles in circuit ; on the west it is flanked by the river, and on all other sides by paddy-fields, which are so low that at spring tides in the monsoon, they are but little above the level of high water. The highest point of the ground, on which the town stands, is 14 feet above high water mark.

The town is studded with fruit and other trees, of various kinds, under the shade of which the houses are built ; they are for the most part constructed of wood, raised 5 or 6 feet above the ground, and are all constructed after a fixed

model, from which little deviation is ever observed;—light is carefully excluded, and air is only admitted through the thin partitions, which are usually of bamboo; they are clean, neat, commodious and comfortable dwellings. Each family lives, detached from all others, with a small fenced spot of ground, surrounding the residence. The town, which during the rains, used to be almost under water, has lately been drained, and the roads, if such they could be called, which were quite impassable, have been laid with brick.

The inhabitants of the town consist of burmese, and taliens, with a good many chinese; the latter set a good example of industry to the lazy burmese, but the few natives from Bengal and Madras, on the contrary, are extremely indolent. The burmese are a healthy people, stout, and well made, but under-sized, they are fair and cleanly in person, and apparently subject to but few diseases; they are intelligent looking, and appear to be happy, are not quarrelsome, nor are they easily depressed or elated. They are quiet and orderly in their amusements, sober and well behaved, but are considered to be heartless, and indolent, and their morals do not bear scrutiny.

Their chief food consists of rice, eaten with gnapee, but numerous vegetables are also used, as they eat almost every leaf, root, and fruit, apparently with impunity, though colic is said occasionally to be the consequence; every description of animal food is also eaten.

The dress is light, clean and gay looking, and although the love of gold is universal, they readily part with it, in presents to the poonghees, or priests; to feast their friends; or to give *poœs*, a theatrical amusement in which they delight.

The person who happens to be in immediate authority amongst them, although he may have been a convict in irons the day before, is the object of the greatest respect and reverence. No mendicants are to be found, except the priests, who subsist upon the voluntary offerings of the pious and

charitable; they live in a state of celibacy, secluded from the world, in kyoungs or monasteries, and are the instructors of the young; almost every burman can therefore read and write.

Polygamy is not permitted, but divorce is easily procured.

Women, though obliged to work, whilst the men sleep, eat, or amuse themselves, are nevertheless not ill used. They have intelligent, though not handsome countenances, are cleanly in their dress, and are allowed free liberty to go about; they are prolific, and fond of their children, whom they suckle for three, four or even five years.

Diseases. The town, and surrounding country are remarkably healthy, the prevailing diseases being intermittent fever of a mild form, and catarrhs, chiefly occurring at the setting in of the south-west monsoon. About six years since, small pox carried off a great many of the inhabitants.

Cholera, also made its appearance about the same time, but was confined to the burmese.—They are averse to applying to Europeans for medical assistance, the cause of which is not understood, every encouragement has been held out to them, but hitherto they have not often availed themselves of it, and some of those who have applied for aid, were unfortunately in the advanced stages of disease, so that their confidence could not be gained, by effecting cures.

Military force. The detachment of troops, consists of about 40 European infantry and artillery, and 200 sepoys.

The fort, within which the barracks for the troops, and the various public buildings are situated, is in the centre of the town, extending one thousand yards from east to west, and eight hundred from north to south.—The walls are of brick, having an entrance at each face, and they are partly surrounded by a deep trench. The extent of the fort, bears the proportion of about one-third, to the rest of the town.

The European infantry barracks, occupy the best spot of ground, on a mound formed by the ruins of an old pagoda,

they are built of wood, not raised from the ground, but the floor is laid with bricks. It is an oblong building, with verandahs on the south, west, and north sides; its length 84 feet, breadth 51, and height 12 feet, and it is well ventilated, clean and capable of holding 30 cots; five small rooms are partitioned off, for married men.

Artillery barracks. On the same line, and a little detached, are the artillery barracks, similar in construction, but of smaller dimensions, being in length 63 feet, in breadth 48, and in height 12 feet. The gun-shed stands a little in front, and to the right, these and two guard rooms, being the only buildings on the mound.

Magazine. The magazine, is about 80 feet in front of the gun-shed, a public road which runs at the foot of the mound, separating it from the parade ground.

Hospital. On the opposite side is the hospital, which is a large and very good wooden building, raised 5 feet from the ground, and divided into a European and native ward, by a passage, in which the guard is stationed; this building is 104 feet in length, in breadth 41, and in height 11 feet; the European ward is capable of holding 20 patients, it is clean, well ventilated, and surrounded by a verandah 6 feet wide, the surgery is in one corner, and a room for hospital clothing in another. The native ward is also commodious, the verandahs on two sides, having been taken in, and it is capable of holding 40 patients; on the north side the verandah is partitioned off, for the use of the medical subordinates. There is a privy attached, but no dead house.

Native barracks and lines. The native barracks, or place of arms, are at the foot of the brick mound, on the left; the native lines being immediately in the rear, occupying a small piece of ground, which is rather too confined.

Officers' houses. The Officers' houses are at a short distance rom, and within sight of the barracks.

Wells are numerous, and the water is good.

The bazaar is almost adjoining the right of the barracks.

Health of troops — The small detachments stationed at Tavoy, have in general been remarkably healthy, and there has been nothing, as regards their state of health, to call for particular remark.

MERGUI.

General description. — Mergui, the most southern of the Tenasserim provinces, formerly belonged to the Siamese, but it having been invaded by the Burmese in 1785, was given up to them, by a treaty of peace concluded between the two powers, in 1793, and the Burmese retained possession of it, till after the war with the British.

It is bounded on the north, by the province of Tavoy; on the east, by the Siamese territory; on the south, by the Pachan river; and on the west, by the bay of Bengal.

Mergui Archipelago. — The Mergui archipelago, consisting of numerous small islands on the coast, belongs to this province.

Appearance of the country. — The surface of the country is mountainous, and much intersected by streams; two principal ranges of hills, varying generally, from four to fifteen hundred feet in height, traverse the centre of the province, from north-east to south-west, running parallel with each other, and separated only by the river Tenasserim, which winds through the valleys between them, until it arrives at the old town of Tenasserim, where it is joined by a stream from the eastward, called the little Tenasserim; it then pursues a westerly direction, passing through a gap in the range of hills, and reaching the low land bordering the coast, divides into several channels, which flow into the bay of Bengal.

The line of coast is very irregular, and for several miles inland, but little raised above the level of the sea; it consists for the most part, but particularly to the southward of Mergui, of low uncultivated mangrove islands, here and there however,

small plains, of fertile land adapted for the growth of rice are found, with occasional hills of moderate elevation, upon which there are gardens of the areca palm, and plantain.

The whole face of the country, unless where cleared for cultivation, is densely clothed with luxuriant vegetation, and towards the interior, and in the more elevated situations upon the coast, forest trees arrive at the largest size. After passing the mangrove limits, towards the interior, a gradual elevation of the surface is perceptible, and the country becomes mountainous, even to the bank of the river. After passing the town of Tenasserim, situated about 38 miles east of Mergui, at the

Tenasserim river.

junction of the rivers, it becomes suddenly changed, the river flowing through an alluvial valley, varying in breadth from 5 to 20 miles, having a horizontal or slightly undulating surface; the banks are here generally very high, and nearly perpendicular, in some parts however, the course of the river is through low lands, and there are many islands in its bed, giving to the scenery a picturesque character. The channel in some situations, is so narrowed as to occasion rapids, which are passed with difficulty, at certain periods. The river is navigable for large boats up to the town of Tenasserim, but beyond that, even those of small size, cannot proceed far, without much difficulty. The influence of the tide, is felt for about 10 miles above Tenasserim.

Climate.

The climate of Mergui is agreeable, and remarkable for its salubrity, the heat during the months of March, April, and May, being moderated by the land and sea breezes; the latter usually commences to blow, between the hours of 9 and 12, in the day, and continues till 6 or 8 in the evening, soon after which the land breeze sets in, and continues with delightful coolness, till morning—During the rainy months, from June to the end of October, the sun is seldom visible, and the air is in consequence so cool, that many persons prefer this season to any other, as there are frequent intervals of fine weather. The months of November, December, January and February, are cool, and Europeans like the comfort of a blanket at night. During

the year 1840, from observations taken three times daily, the extreme variation of temperature, was found to be only 25°, the highest range of the thermometer, in a room about 100 feet above the level of the sea, having been 93° at 2 P. M., in April, and the lowest 68°, in November and December, at sunrise ; though the Mercury occasionally falls below this, as in January 1842, when it was down to 63° at sunrise. Northerly winds, veering from east to west, prevail from December till March, during the remainder of the year, they are from the south-west ; in the rainy season, violent storms of wind and rain, from the N. W. occur, and continue for many days together. Thunder storms, accompanied by torrents of rain, are of frequent occurrence in the months of April and May, and also at the change of the monsoon, in October and November. The transitions in the state of the weather, are often observed to be very regular, in their recurrence ;—for example, it frequently commences raining at a certain hour in the day, continues perhaps for several hours, and is succeeded by an interval of fine weather, this occurring several days in succession ; when a sudden and complete change may occur, and storms of rain, which previously came on *daily* in the *evening*, now happen at *noon*, or, some other stated period, of the 24 hours. It also often happens, that storms recur during several successive days, but on each occasion, an hour earlier or later, than the previous one.

The most obvious peculiarity of the climate, is the great humidity of the astmosphere, dew is deposited in great quantity, during the north-east monsoon, and volumes of misty clouds, obscuring the sun's rays, which are not dispersed before 9 or 10 o'clock, may be also seen hanging over the face of the country, especially in the interior. In the year 1840, there were 207 days upon which rain fell, and no month passed without rain, in which respect, Mergui is favoured beyond the other parts of this coast ; and the climate, is thereby rendered more agreeable, and healthy. About 180 inches of rain fall annually.

Diseases of the country.

With regard to the diseases of the province, they are, with few exceptions, very mild. The most common

complaints among Europeans, and particularly those who have been some time in the country, are affections of the mucous membrane of the bowels, which seems to predispose to attacks of subacute inflammation, in the form of gastro-enteritis, diarrhœa and dyspeptic complaints; but whether they are occasioned, as has been thought, by the impurity of the water, which is much impregnated with the muriatic salts, or by the defective supply of animal food, neither mutton nor good beef being procurable, has not been determined, the probability is, however, that both these circumstances influence the health of strangers resident on this coast.

For Europeans debilitated by the climate, or diseases of India, the place offers several advantages, and in many cases, a residence here of 6 or 8 months, would it is believed, supersede the necessity of a return to Europe.

Health of native troops.

The native troops are less healthy than the Europeans, and the proportion of sick, is usually greater than in India;—they are particularly liable to skin diseases, also to diarrhœa, rheumatism, remittent and intermittent fevers, beriberi, atrophia and various forms of dyspepsia, the three last mentioned diseases often proving fatal, or rendering a return to their native climate requisite. A peculiar form of ulceration, which affects both Europeans and natives, is very common, it breaks out in different parts of the body, becomes as large as the palm of the hand, and spreads in one direction, as it heals in another; the sore presents a white sloughy bottom, with ragged edges, surrounded by a ring of a reddish or copper colour, and is attended with great pain and emaciation. Some cases of this disease have been cured, by a course of the arsenical solution, with sarsaparilla.

Government of the country.

The commissioner of the provinces, usually visits Mergui four times a year, for the purpose of holding a sessions, and hearing appeals, but the immediate charge of the province, is in the hands of one of the assistants, to the commissioner, who has a court for deciding police and other cases,

of minor importance, in which he is assisted by the *tsik-kai*, or native magistrate.

The province is divided into several districts, each of which is under a *thoo-gyee*, or head constable, who collects the revenue, and conducts the business of the villages in his charge.

The villages are thinly scattered, and consist usually of from 20 to 50 houses; the spot being selected for some local advantage, and three or four houses are always clustered together for mutual protection.

Habitations of the natives.

Among the burmese, one family only occupies each house, but some of the kureens are social, many families, consisting perhaps of 50 or 100 individuals, live under the same roof.—The house consists of a long room, with a common central passage, running from end to end, on each side of which are apartments, separated by bamboo mats, but opening towards the public passage; the villages, and houses are almost invariably built upon the banks, or within a short distance of some navigable stream, with which the country is intersected in all directions.

Population.

The population of the province is about 30,000, and from the returns of the village authorities, the births it appears, exceed the deaths, in the proportion of 560 to 256, or more than double.

It is scarcely possible to enter the country, unless by a few beaten tracks, or by water, from the impenetrable nature of the jungle, and it has consequently, been but imperfectly explored.

Geological features.

The more westerly islands of the Mergui archipelago, are composed entirely of the primary crystalline formations, chiefly varieties of granite and porphyry, whilst those near the main land, apparently belong to the transition series, and consist of sandstone, gray wacke, and conglomerate; and in the composition of the latter, iron forms an important constituent. The geological features, of the main land, near the

shore, do not differ materially from the last mentioned islands; but at a distance of from 15 or 20 miles in the interior, the secondary stratified formations predominate,and of these,the old red sandstone is most common, the town of Tenasserim being built on a rock of this nature. On ascending the river, the formations are seen to belong to the tertiary series, having often the character of fresh water deposits, found lying upon an extensive horizontal bed, of reddish, sandy marl; in many parts, the river having perpendicular banks, 20 or 30 feet high, through which thin beds of blue marl, and gravel are interspersed; and towards low water mark, there are frequent beds of argillaceous, and nodular iron ore. Several large beds of lateritious, or ferruginous clay, exist along the banks of the river, having the usual peculiarity of laterite, that of hardening by exposure to the air, and it is used by the burmese in constructing their large idols.

Coal. The coal latcly discovered in this valley, appears to occupy a very extensive tract, having been already found exposed on the surface, in five distinct localities; from experiments which have been made, it would seem to be well adapted for steamers, it has a low specific gravity, burns with a brilliant white flame, and leaves but a very small proportion of ashes;—it is believed to be what Jamieson calls, "foliated or cubical coal," and belongs to the independant coal formation of Werner.

In mineralogy several important discoveries have been made, the chief of which are tin and iron;—copper ores have also been found, in small quantity, and gold is scantily distributed in the beds of the mountain streams, particularly those issuing from the eastern range. The siamese occasionally bring it down to Mergui for sale, from a place which is described, as being ten days journey inland from Tenasserim, it is procured by washing. Ores of manganese and iron, exist in considerable abundance.

Hot springs. The following account of the thermal springs, on the Palouk river, between Mergui and Tavoy, is given by Captain MacLeod.

"The springs are situated up the Palouk river, which takes its rise on the western side of a high range of mountains, running along the western, or right bank of the river Tenasserim; at its mouth, which is about 50 miles from Mergui, it is about 700 feet wide, but narrows higher up, towards the village of Palouk, and soon after passing the village, it becomes in places very shallow, and a succession of rapids and falls are met. Having ascended as far as I could in a small canoe, which was dragged over rapids, I performed the latter part of the journey by land, in consequence of the river becoming too shallow, and the rapids or falls getting stronger; in returning however, I descended the stream, the whole way, on a small bamboo raft. The hills, which from Palouk, range along the sides of the river, are by no means high, but are covered with thick jungle and high trees; there are two spots where the springs show themselves, one immediately on the right bank of the river, (here about 100 feet wide,) with some in the river itself, and the others about two or three minutes walk to the northward, inland; around the former a mound of circular stones, of various sizes, was caked together with hardened clay, having the appearance of stone, the whole of this mound had externally a black appearance, and in some places, small circular basons had been formed, by springs now dry. All the springs now flowing, are close to the waters edge, or in the water; they issue from under the rocks, through a sandy bottom, the orifices are very small, and not above two inches deep, and a thermometer being dipped into the hottest, rose to 196° Far. Their height above the sea I estimate at about 200 feet. The springs a little inland, are larger and deeper, they are situated in a small open space, and there must be about 30 or 40 bubbling up, along a line of about 50 feet by 20, the largest being at the northern extremity. I took the water from two of the largest springs, one about three and half feet deep, and two feet in diameter, and the other about half that size, in both the thermometer indicated a heat of 194°, the ground at the bottom, is of a dark shining colour, here and there resembling the colour of brick-dust, the trees

and grass grow luxuriantly around, and in the open space the marks of hogs,deer, &c. are seen—The springs are situated in about 13° 20″ north latitude, and 90° 19″ east longitude. Though vapours rise from them,no disagreable smell pervaded the atmosphere, nor had the water a very disagreeable taste.—There are other springs, in a north-west direction from these, at a place called Pe, and there is nothing in this neighbourhood that I know of, indicating volcanic agency." In reference to the latter remark however, it may be observed, that Banen island in the bay of Bengal, forms the northern extremity of a great volcanic band, including Sumatra, Sunda, the Malacca and the Phillipine islands, completely surrounding the Malayan peninsula seaward; many volcanoes along this tract, are even now in active operation, among which is Banen island; and at the time of a violent earthquake, which occurred about three years since at Ava, the shock was plainly felt at Mergui, and other places on the Tennaserim coast. A rough analysis of the water of these springs, showed them to be strongly impregnated with sulphuretted hydrogen, and to contain also, a small proportion of iron, and carbonate of lime, the latter substance, being deposited in a tufaceous form, upon the surface over which the water runs.

Botanical productions. Collections have been made in botany, both by Dr. Helfer, and Mr. Griffiths, but comparatively little has however yet been done, and an extensive field is still open for research. Couchouck, tannin, and gums, are abundantly produced; from the dammar tree, a resin, applied to various purposes is obtained; and from the wood oil tree, a material in great quantity, to the amount sometimes of 5 or 6 gallons from a single tree, which is used by the burmese for making torches, and instead of paint, to preserve timber; and which from its abundance, is exceedingly cheap. Bamboos, and cotton trees of several kinds,are plentiful, and also the *theugan* " hopea adorata", an excellent timber tree, used for building. Ratans of several kinds abound; palms occupy a very conspicuous place, and among them the attap palm " cocos-nypa", is perhaps the most useful; from it toddy and sugar are obtained, and its leaves are used for roofing houses, for

which purpose they are well adapted, forming an impervious defence against heavy rains, and from being furnished with a silicious coating, it does not readily decay, lasting three years. The "cesalpinea sappan," the wood of which is used as a dye, grows in great abundance in the interior, and is a chief article of export, from the port of Mergui. Of

Fruits. fruit trees, the principal are the doorean, jack, mangosteen, mango, papaya, cocoanut, areca, guava, mulberry, cashew, lime, orange and pumplemose;—there are besides many indigenous fruit trees in the forests, some of which it is believed, might be much improved by cultivation. The country also, produces rice of several kinds, plantains, yams, sweet-potatoes, chillies, sesamum, black pepper in small quantities, tobacco, pine-apples, melons, gourds and cucumbers.

Animals. The animals met with, are the elephant, tiger, rhinoceros both double and single horned, wild cattle, the buffaloe, bear, hog, elk, deer of several kinds, the wild cat, monkeys and squirrels of several varieties, the rat, porcupine, armadillo and sloth. Dr. Helfer says in one of his papers, "I have had an opportunity of ascertaining positively, the existence of the "tapirus malayanus", within the British boundaries, in latitude 11° 37″, in the province of Mergui, though I have not been so fortunate as to obtain a specimen of it, it is well known to the natives, who call it the great pig." Wolves have been reported to be seen, in the mountains in the interior, nevertheless their existence seems somewhat doubtful, as Dr. Helfer observes "that the genus canis, has no representative in the countries trans-Burhampooter, so far as I am aware." It has been said that the tigers on this coast never attack man, one or two melancholy instances, have however occurred lately, proving the contrary to be the case, but such occurrences are undoubtedly very rare, and the facility with which they obtain their prey, such as deer and other animals, may account for this circumstance. The rhinoceros is common, and much dreaded by the natives.

Reptiles. Saurian reptiles are numerous, the chief are alligators, iguanas, a large brown lizard, very similar to the

latter, and a large spotted lizard, frequently found in the roofs of houses, called by the natives "Touk-tai", the small house lizard, also several varieties of the chameli-on lizards, or blood-suckers. Ophidian reptiles, both land and water species, abound, they are not generally venomous. Of the chelonian reptiles, turtles are most common, and at a certain season,they resort in great numbers to particular sand-banks on the river, where they deposit their eggs. These banks are rented by Government. Tortoises are also common; and three species of the batrachian family are seen, one of which is the chunam frog of India.

Birds. In ornithology some collections have been made, the feathered tribes of the province, nearly all migrate, for a shorter or longer period ; few are remarkable as song-sters, but the plumage of several is very beautiful. Of crows there are two kinds, very similar though not precisely like those of India ; jungle fowl, of the same type as the common domestic fowl, but smaller, are very plentiful in the woods, and afford abundance of amusement to the sportsman ; after the rice harvest, they are in excellent condition, and scarcely inferior in flavour, to the English pheasant. Pea fowl, black, brown and argus pheasants, a species of partridge, and quails, are pretty common;—a large kind of duck, which rests upon trees, teal of two kinds, snipe, golden plover, and a small gray duck are also abundant.

Insects. Insects are met in great variety, and splen-dour, the luxuriance of the vegetation, together with the heat and moisture of the climate, being conducive to their propo-gation ; musquitoes, sandflies, eyeflies, and ants of various kinds, are not less troublesome than abundant;—of ants there are it is believed, not less than 100 kinds, of bees, hornets, and wasps, there are also several varieties, one of the latter is particularly troublesome, from the circumstance of its appear-ing only after sunset, and like the moth, being attracted by light, it continues fluttering about the candle or lamp till burnt, when becoming irritated, it is apt to sting persons near.

The coleopterous insects,are especially remarkable for their number and beauty.

Small brown scorpions and centipedes, are very common.

Among the arachnidæ is found the tarantula, and also a beautiful large spotted spider.

Town. Mergui or "Byite", stands on an island of the same name, at the principal mouth of the Tenasserim river, which opens into the sea about two miles to the north, and about one to the south of the town; it is in north latitude 10° 36″, and east longitude 98° 30″. The harbour admits vessels of 18 feet draught of water,which can anchor close to the wharf, and the tide rises 17 feet in the springs,the banks near the town are hard gravel,but towards the sea,mud flats extend some distance,a sand bank of some considerable length showing itself at low water. The town consists of about 1500 native houses, besides the barracks for the troops, and other public buildings.

Barracks and hospitals. The barracks stand on the summit of a small hill, around which is the town, and the houses of the officers are situated upon open ground, on its north-western face, all the buildings are raised upon posts.

Native houses. The native houses, generally consist of two rooms and a small verandah, the flooring, is made of split bamboos,and elevated about eight or ten feet from the ground. The sides and partitions of the houses, are either of the leaves of the neepa palm, or of a large description of reed, which being soaked in water to prevent insects attacking it,it is then opened out, and wove into mats.

Officers houses. The officers houses are either constructed of the materials above mentioned, or with sides and floorings of plank ; the European and native barracks and hospitals, are planked. The small hill upon which they stand, is about 100 feet high, of an oblong form, having on its western or sea face a pretty steep ascent, but on the other sides a gradual slope; and from its summit is a fine view of the sea, and the islands forming the opposite shore,about a mile distant seaward.

Country in the vicinity of the town.

The ground in the vicinity of the town is undulating, covered with a low jungle, with here and there bare spots of pasturage, and on the south and eastern sides, are salt and fresh water swamps, through the centre of which runs a large nullah, which enters the river about half a mile above the town ; the swamps are covered by a low brush wood of mangrove trees, and other plants, which thrive only within reach of salt water.

The health of persons residing in this vicinity, does not appear to be injured thereby. About half a mile north-east of the town,and 5 or 600 yards from the river,is a fine open rising ground, in every respect well adapted as a site for barracks, which it is to be regretted was not originally selected for that purpose.

The prevailing soil near the town, is a reddish marly loam, of from 3 to 20 feet in thickness, lying upon a substratum of gravel,composed of quartz and felspar pebbles, and on the north side,within a few minutes walk of the town,are two freshwater tanks, or lakes, which in the driest seasons, are four feet deep.

Inhabitants of the town.

The town has nearly 8,000 inhabitants, consisting of people of various nations; such as english, americans, french, portuguese, chinese, burmese, siamese, malays, bengalees, madrasites and cingalese ;—and there are two american baptist missionaries, and one french priest, belonging to the roman catholic mission of siam, established here.

Troops.

The troops consist of one company of native infantry, and 30 Europeans, commanded by a captain and subaltern respectively.

Trade.

Mergui is tolerably supplied with articles of grocery, and other necessaries, from Calcutta, Moulmein and Penang, the principal trade being carried on by chinese, and the best artizans, also belong to that nation. There is a post office establishment here, and opportunities for sending letters to Moulmein and other places, by a government vessel, generally occur about once in six weeks.

Markets. Exeellent bread, butter and milk, are to be had, at a little above the Madras priees, the market is also well supplied with vegetables ; beef, though of an inferior description, and good pork can be had oceasionally, but mutton is not proeurable ; geese, ducks and fowls, are plentiful—fish, both fresh and salted, is in great variety and abundanee, and the pomfret in particular is excellent, crabs, oysters, and prawns, are also to be procured, in the season.

Exports. The chief exports are, sappan-wood, neepa palm leaves, or attaps for roofing, rattans, yams, gnappce, dried fish, ivory, tortoise shell, sea slugs, shark's fins, and edible nests.

Ivory is chiefly brought to Mergui, from the interior, by Siamese hunters

Seelong, or natives of the Islands. The *Seelongs,* a miserable race of savage fishermen who inhabit the neighbouring islands, have no fixed habitations, and live ehiefly in their boats in which they rove from island to island in quest of food, they gain a precarious livelihood by collecting tortoiseshell and pearls, some of the latter being of good size and quality ; they also gather sea slugs, honey and some other trifling artieles. This singular race of people are almost amphibious.

Edible nests. Edible nests, are exported prineipally to Penang and Singapore, for the chinese market;—they are the nest of a small swallow, and composed of a glutinous substance, which when cooked, has very much the taste of vermicelli. They are found in caverns in several of the islands on the coast, adhering to the rock. Government derives a revenue from the sale of them, of about 4,000 rupees per annum ; nests of good quality selling for very high prices.

Concluding remarks. Mergui offers great advantages to settlers, the soil being exceedingly fertile, and grants of land may be obtained on liberal terms; plantations of coeoanut, and areca trees, would probably yield the most eertain profit, the climate being favorable to their growth ; coffee, cloves, and nutmegs, would also, it is believed, succeed well.

REMARKS ON THE GENERAL TABLES.

Remarks on the general tables of disease.

The usual tables of disease as for the nine preceding divisions of the army, are appended. Table No. 1 for Europeans, includes the sick of H. M.'s regiment, and the Hon. Company's Artillery at Moulmein, and also of the small detachments at Tavoy and Mergui; it shews the amount of sickness and mortality, from the most important diseases each half year, during the period of ten years, from 1829 to 1838 inclusive, along with the annual per centage of sick to strength, of deaths to sick treated, and of deaths to strength; the average of these, as shewn in the abstract table No. 2., being 143·488, 2·606, and 3·739 respectively.

The admissions, but especially the mortality, were greatly increased in 1834, owing to the sickly state in which H. M.'s 62d regiment, arrived from Masulipatam that year; and amongst whom dysentery and fever, were remarkably frequent and severe.

In the abstract table No. 2, it will be observed, that the total admissions have been 13,046, and 340 deaths have occurred, in an aggregate strength of 9092 men. The most prevalent diseases have been *fevers, dysentery, diarrhœa, hepatitis, thoracic diseases, rheumatism and syphilis*; and the most fatal have been *dysentery, fever, hepatitis and thoracic diseases*; the per centage of admissions and deaths from each of which is noted in the table.

It is worthy of remark, that except in 1838, the column under the head cholera, is nearly blank.

The corresponding tables No. 3 and 4, for the native troops, comprise the sick of the military at Moulmein, and of the detachments at Tavoy and Mergui. The total number treated has been 9,921, and 204 men have died, from an aggregate strength of 14,716. The average per centage of sick to strength, has been 67·416, of deaths to sick treated 2·056, and of deaths

to strength 1·386. The most numerous admissions have been from *fevers, rheumatism, bowel complaints and syphilis;* and the mortality has resulted principally from *bowel complaints, fever, rheumatism, and thoracic diseases.* During these ten years, only seven cases of cholera are recorded, and one death.

The tables No. 5 and 6, for European and native sick respectively, are drawn up similarly to those for the preceding reports; they exhibit the admissions and deaths from the specific diseases, in each of the various classes, during a period of five years, from 1834 to 1838 inclusive; the total sick from each class, is also shewn with the mortality, and the per centage of admissions to strength, and of deaths to sick treated.

Amongst the European troops, table No. 5, the most numerous admissions have been from the classes of *fevers, abdominal complaints, diseases of the lungs, venereal and rheumatic affections, and diseases of the brain;* and the most fatal have been *fevers, bowel complaints,* especially *dysentery,* and *diseases of the lungs.* During these five years the per centage of sick to strength, has been 149·326, of deaths to sick treated 2·966, and of deaths to strength 4·430·

In the table No. 6, for the native troops, the greatest number of admissions it will be seen, have been from the classes of *fevers, rheumatism, bowel complaints, cutaneous and venereal affections, and diseases of the lungs;* and the greatest mortality has been occasioned by *fevers, bowels complaints, rheumatism and diseases of the lungs.*

The tabular statements No. 7, 8, 9 and 10, exhibit the proportion and per centage of the admissions and deaths, from the most important diseases, and the principal classes of disease, both amongst the European and native troops, and give at one view, much interesting information on several points.

H. M.'s Regiment, and the H. C.'s Artillery at Moulmein, contrasted.

Table No. 11 and 12.	H. M.'s Regiments. Aggregate strength 9037. From 1829 to 1840, exclusive of 1834.				H. C.'s Artillery. Aggregate strength 886. From 1829 to 1840, exclusive of 1831, 32 and 1835.			
	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.	Admitted.	Died.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers	3706	56	41 ·009	1 ·511	170	5	19 ·187	2 ·941
Cholera	4	1	0 ·044	25 ·000	0	0	0	0
Diarrhœa	979	10	10 ·833	1 ·021	165	3	18 ·623	1 ·818
Dysenteria acuta	902	71	9 ·981	7 ·871	74	4	8 ·352	5 ·405
,, chronica	361	26	3 ·994	7 ·202	21	1	2 ·372	4 ·761
Hepatitis acuta	303	15	3 ·352	4 ·950	26	1	2 ·934	3 ·846
,, chronica	406	12	4 ·492	2 ·955	38	1	4 ·288	2 ·631
Catarrhus	628	4	6 ·949	0 ·636	33	1	3 ·724	3 ·030
Hæmoptysis	3	0	0 ·033	0 ·000	0	0	0	0
Asthma	10	2	0 ·110	20 ·000	6	2	0 ·677	33 ·333
Phthisis pulmonalis	21	9	0 ·232	42 ·857	3	2	0 ·338	66 ·666
Pneumonia	65	7	0 ·719	10 ·769	1	0	0 ·112	0 ·000
Apoplexia	4	4	0 ·044	100 ·000	1	1	0 ·112	100 ·000
Epilepsia	10	0	0 ·116	0 ·000	4	0	0 ·451	0 ·000
Paralysis	23	2	0 ·254	8 ·696	1	0	0 ·112	0 ·000
Amentia	5	0	0 ·055	0 ·000	4	0	0 ·451	0 ·000
Mania	9	0	0 ·099	0 ·000	0	0	0	0
Ebrietas	17	0	0 ·188	0 ·000	7	0	0 ·790	0 ·000
Delirium Tremens	42	5	0 ·464	11·904	18	0	2 ·031	0 ·000
Anasarca	22	5	0 ·243	22 ·727	0	0	0	0
Ascites	6	3	0 ·066	50 ·000	0	0	0	0
Rheumatismus acutus	330	0	3 ·651	0 ·000	37	0	4 ·175	0 ·000
,, chronicus	231	3	2 ·556	1 ·298	54	0	6 ·094	0 ·000
Syphilis &c	1329	3	14 ·706	0 ·225	149	1	16 ·817	0 ·671
Morbi oculorum	157	0	1 ·737	0 ·000	16	0	1 ·805	0 ·000
,, cutis	100	0	1 ·106	0 ·000	8	0	0 ·902	0 ·000
Other diseases	3749	15	41 ·486	0 ·400	409	5	46 162	1 ·222
Total	13,422	253	148 ·522	1 ·884	1245	27	140 ·519	2 ·168

Per centage of deaths to strength, 2.799. H. H.'s Troops.

Per centage of deaths to strength, 3·047. H. C.'s Troops.

TENASSERIM COAST.

Table No. 1.—Return of sick of the European Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838.

Years.			Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	747	0	0	0	0	0	0	25	61	0	0	63	170	107	0	25	0	0	17	12	0	6	41	0	90	130	994	154 ·766	2 ·806	4 ·343
		2d ,,	714	0	0	0	0	0	0	18	75	0	0	94	213	40	0	24	1	0	12	13	0	7	72	0	51	94				
	Died.	1st half.	17	0	0	0	0	0	0	2	5	0	0	1	0	3	0	0	0	0	0	0	0	0	1	0	1	4				
		2d ,,	24	0	0	0	0	0	0	0	4	0	0	5	5	3	0	2	0	0	0	1	0	0	4	0	0	0				
1830	Admitted.	1st half.	765	1	0	0	0	0	0	21	97	0	0	95	168	44	0	33	0	0	11	20	0	20	70	0	94	91	989	153 ·286	1 ·715	2 ·628
		2d ,,	751	0	0	0	0	0	0	23	87	0	1	114	125	17	0	43	1	0	15	22	0	47	35	0	95	126				
	Died.	1st half.	10	1	0	0	0	0	0	0	2	0	0	2	1	0	0	1	0	0	0	1	0	0	1	0	0	1				
		2d ,,	16	0	0	0	0	0	0	1	4	0	0	2	2	1	0	1	0	0	0	1	0	0	3	0	0	1				
1831	Admitted.	1st half.	720	0	0	0	0	0	0	11	79	0	0	138	63	17	0	46	0	0	11	22	0	27	24	0	125	157	942	145 ·116	1 ·682	2 ·441
		2d ,,	647	0	0	0	0	0	0	47	59	0	1	99	62	17	0	26	2	0	5	35	0	35	35	0	98	126				
	Died.	1st half.	15	0	0	0	0	0	0	0	6	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	3				
		2d ,,	8	0	0	0	0	0	0	1	2	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	0				
1832	Admitted.	1st half.	664	0	0	0	2	0	0	17	119	0	3	122	31	5	0	30	1	0	11	15	0	88	8	0	81	131	980	137 ·448	2 ·449	3 ·333
		2d ,,	683	1	0	0	0	0	0	18	151	0	3	112	22	6	0	32	2	0	7	14	0	49	30	13	83	140				
	Died.	1st half.	16	0	0	0	1	0	0	0	8	0	0	0	0	0	0	4	0	0	0	0	0	0	2	0	0	1				
		2d ,,	17	1	0	0	0	0	0	0	3	0	0	9	0	0	0	2	0	0	0	0	0	0	0	2	0	0				
1833	Admitted.	1st half.	427	1	0	0	0	0	0	29	39	0	8	83	12	2	0	8	0	0	6	8	0	37	6	0	64	124	858	95 ·104	2 ·818	2 ·680
		2d ,,	389	0	0	0	0	0	0	23	43	0	6	75	13	3	0	6	0	0	13	8	0	25	6	0	63	105				
	Died.	1st half.	12	1	0	0	0	0	0	0	3	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	5				
		2d ,,	11	0	0	0	0	0	0	1	4	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	1	1				
1834	Admitted.	1st half.	293	0	0	0	1	3	0	15	24	0	5	38	3	4	0	10	0	0	10	9	0	40	6	0	37	88	620	184 ·032	6 ·923	12 ·741
		2d ,,	848	0	0	0	5	0	0	62	184	0	4	56	231	11	0	8	0	0	4	17	0	26	13	0	40	187				
	Died.	1st half.	10	0	0	0	0	0	0	0	5	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2				
		2d ,,	69	0	0	0	2	0	0	2	37	0	0	0	5	4	0	0	0	0	0	1	0	1	3	0	0	14				
1835	Admitted.	1st half.	62	0	0	0	0	0	6	4	5	0	1	0	0	1	0	1	0	0	0	8	0	7	2	0	9	18	457	57 ·330	0 ·763	0 ·437
		2d ,,	200	0	0	0	0	3	11	20	10	0	0	1	4	0	0	4	0	0	9	7	0	14	14	0	32	71				
	Died.	1st half.	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0				
		2d ,,	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
1836	Admitted.	1st half.	667	0	0	0	0	11	25	61	58	0	1	33	8	3	0	23	3	0	9	25	1	79	46	1	78	202	918	134 ·858	2 ·093	2 ·723
		2d ,,	571	0	0	0	0	5	8	99	36	0	3	101	8	2	0	11	0	0	5	25	1	44	26	0	45	152				
	Died.	1st half.	8	0	0	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1				
		2d ,,	17	0	0	0	0	0	0	0	10	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	1	1				
1837	Admitted.	1st half.	583	0	0	0	0	2	0	68	42	0	6	148	1	6	0	19	0	0	4	29	0	33	12	1	66	146	891	151 ·964	2 ·141	3 ·254
		2d ,,	771	0	0	0	2	4	0	76	73	0	7	183	3	4	0	34	0	0	2	49	0	65	48	2	59	160				
	Died.	1st half.	14	0	0	0	0	0	0	1	6	0	0	2	0	0	0	1	0	0	0	2	0	1	0	0	1	0				
		2d ,,	15	0	0	0	0	0	0	3	5	0	0	1	0	0	0	2	0	0	0	0	0	0	2	0	0	2				
1838	Admitted.	1st half.	1390	1	0	0	24	5	4	165	76	0	6	349	6	0	0	90	0	0	17	95	1	136	59	2	74	280	1493	170 ·395	2 ·319	3 ·951
		2d ,,	1154	0	0	0	2	6	2	95	86	0	5	144	8	20	0	68	1	0	30	117	0	121	57	0	94	298				
	Died.	1st half.	42	1	0	0	14	0	1	1	10	0	0	9	0	0	0	1	0	0	0	0	0	1	2	0	0	2				
		2d ,,	17	0	0	0	0	0	0	1	5	0	0	3	0	1	0	4	0	0	0	0	0	1	0	0	0	2				

TENASSERIM COAST.

Table No. 2.—Europeans—Abstract of the preceding Returns, shewing the total number of admissions and Deaths &c. from 1829 *to* 1838.

	Diseases.																									
	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate strength. 9092																										
1829 to 1838. Admitted. 1st half.	6,318	3	0	0	27	21	35	416	600	0	30	1069	462	189	0	285	4	0	96	243	2	473	274	4	718	1367
2d ,,	6,728	1	0	0	9	18	21	481	804	0	30	979	689	120	0	256	7	0	102	307	1	433	336	15	660	1459
Total..	13,046	4	0	0	36	39	56	897	1404	0	60	2048	1151	309	0	541	11	0	198	550	3	906	610	19	1378	2826
Died. 1st half.	145	3	0	0	15	0	2	4	50	0	1	18	1	4	0	11	0	0	0	3	0	2	8	0	4	19
2d ,,	195	1	0	0	2	0	0	9	75	0	0	23	12	9	0	18	0	0	0	3	0	2	16	2	2	21
Total..	340	4	0	0	17	0	2	13	125	0	1	41	13	13	0	29	0	0	0	6	0	4	24	2	6	40
Average per centage of sick to strength.	143·488	0·043	0	0	0·395	0·428	0·615	9·865	15·442	0	0·659	22·525	12·659	3·398	0	5·950	0·120	0	2·177	6·049	0·032	9·964	6·709	0·208	15·156	31·082
Do. of deaths to sick treated.	2·606	100·0	0	0	47·222	0	3·571	1·449	8·903	0	1·666	2·001	1·129	4·207	0	5·360	0	0	0	1·090	0	0·441	3.934	10·526	0·435	1·415
Do. per centage of deaths to strength.	3·739	0·043	0	0	0·186	0	0·022	0·142	1·374	0	0·011	0·450	0·142	0·142	0	0·318	0	0	0	0·065	0	0·043	0·263	0·022	0·065	0·439

TENASSERIM COAST.

Table No. 3.—Return of sick of the Native Troops, exhibiting the half yearly Admissions and Deaths, from the principal diseases, and those which have been either Epidemic or Endemic, during the period of ten years, from 1829 *to* 1838.

Years.			Admissions and Deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other complaints.	Strength each year.	Annual per centage of sick to strength.	Annual per centage of deaths to sick treated.	Annual per centage of deaths to strength.
1829	Admitted.	1st half.	1294	1	10	0	0	0	0	51	52	0	0	14	624	38	0	5	2	0	6	128	0	81	6	0	86	190	1923	103 ·640	1 ·756	1 ·820
		2d ,,	699	0	0	0	0	0	0	15	30	0	0	1	351	4	0	2	0	0	2	45	0	21	2	0	26	200				
	Died.	1st half.	24	0	1	0	0	0	0	2	2	0	0	0	5	0	0	0	0	0	0	3	0	1	0	0	2	8				
		2d ,,	11	0	0	0	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0	2	0	0	0	3				
1830	Admitted.	1st half.	729	0	0	0	3	0	0	40	29	0	0	1	297	2	0	2	3	0	5	72	0	43	0	0	47	185	1477	88 ·151	2 ·227	1 ·963
		2d ,,	573	0	0	0	2	0	0	31	9	0	0	7	190	3	0	2	0	0	3	62	0	47	5	0	42	170				
	Died.	1st half.	16	0	0	0	1	0	0	3	3	0	0	0	3	0	0	1	0	0	0	1	0	0	0	0	0	4				
		2d ,,	13	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	7				
1831	Admitted.	1st half.	591	0	0	0	2	0	0	41	26	0	12	18	135	0	0	3	0	0	12	65	0	41	3	0	39	191	1459	79 ·506	1 ·034	0 ·822
		2d ,,	569	0	0	0	0	0	0	38	31	0	27	3	139	2	0	3	0	0	16	64	0	26	10	0	38	172				
	Died.	1st half.	4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
		2d ,,	8	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	4				
1832	Admitted.	1st half.	466	1	0	0	0	0	0	35	19	0	11	3	70	9	0	0	0	0	2	38	0	26	6	0	43	203	1509	65 ·805	1 ·309	0 ·861
		2d ,,	527	0	0	0	0	0	0	21	31	0	19	3	104	12	0	0	0	0	2	46	0	15	5	0	58	211				
	Died.	1st half.	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
		2d ,,	9	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	3				
1833	Admitted.	1st half.	451	0	0	0	0	0	0	29	15	0	16	2	78	2	0	0	2	0	5	56	0	56	4	0	49	137	1394	67 ·934	1 ·583	1 ·076
		2d ,,	496	0	0	0	0	0	0	31	20	0	112	2	43	2	0	0	1	0	3	57	0	64	3	0	36	122				
	Died.	1st half.	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	4				
		2d ,,	9	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2				
1834	Admitted.	1st half.	339	0	0	3	0	0	0	24	16	0	32	2	24	4	0	0	0	0	2	49	1	33	26	1	49	73	1299	49 ·884	1 ·851	0 ·923
		2d ,,	309	0	0	1	0	0	0	10	13	0	38	0	66	6	0	1	0	0	0	31	0	16	5	0	34	88				
	Died.	1st half.	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0				
		2d ,,	8	0	0	0	0	0	0	1	1	0	2	0	1	0	0	0	0	0	0	2	0	0	0	0	0	1				
1835	Admitted,	1st half.	298	0	3	0	0	8	0	2	17	0	43	1	26	0	0	0	2	0	1	37	2	23	7	0	31	95	1175	41 ·531	1 ·844	0 ·765
		2d ,,	190	0	2	0	0	7	0	6	9	0	28	2	16	0	0	0	0	0	1	35	3	8	2	0	18	53				
	Died.	1st half.	7	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4				
		2d ,,	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0				
1836	Admitted.	1st half.	407	0	2	0	0	96	0	19	18	0	17	0	39	4	2	1	0	0	4	72	5	11	8	0	23	86	1284	54 ·283	2 ·295	1 ·246
		2d ,,	290	0	0	2	0	29	0	12	11	0	28	1	45	11	3	0	0	0	2	41	2	10	11	0	51	58				
	Died.	1st half.	7	0	0	0	0	0	0	1	2	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	1				
		2d ,,	9	0	1	1	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	2	0	0	1	0	0	0				
1837	Admitted.	1st half.	239	0	2	2	0	8	0	11	4	0	21	0	26	51	0	0	0	1	1	21	2	8	3	0	23	52	1379	42 ·204	4 ·982	2 ·102
		2d ,,	343	0	2	1	0	14	0	30	14	0	48	1	51	5	0	0	2	0	0	37	4	20	15	0	28	71				
	Died.	1st half.	11	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1	0	0	1	0	1	4				
		2d ,,	18	0	0	0	0	0	0	5	2	0	2	0	0	0	0	0	0	0	0	0	1	0	4	0	0	4				
1838	Admitted.	1st half.	658	0	1	0	0	75	3	44	14	0	196	5	38	4	0	0	0	1	4	70	0	39	11	0	33	120	1817	61 ·144	3 ·060	1 ·871
		2d ,,	453	0	3	4	0	35	0	38	12	0	55	11	18	2	0	2	2	0	1	79	1	26	13	0	30	121				
	Died.	1st half.	17	0	0	0	0	0	0	4	2	0	1	0	0	0	0	0	0	0	0	1	0	1	3	0	0	5				
		2d ,,	17	0	0	1	0	0	0	4	3	0	0	0	2	1	0	1	0	0	0	1	0	1	0	0	0	3				

TENASSERIM COAST.

Table No. 4.—Natives—Abstract of the preceding Returns, shewing the Total number of Admissions and Deaths, &c. from 1829 to 1838.

		Diseases.											
	Admissions and deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.
Aggregate strength. 14,716													
1829 to 1838. Admitted. 1st half.	5472	2	18	5	5	187	3	296	210	0	348	46	1357
1829 to 1838. Admitted. 2d ,,	4449	0	7	8	2	85	0	232	180	0	355	31	1023
Total..	9921	2	25	13	7	272	3	528	390	0	703	77	2380
Died...... 1st half.	100	1	1	2	1	0	0	11	10	0	2	2	11
Died...... 2d ,,	104	0	2	2	0	0	0	18	7	0	5	0	16
Total..	204	1	3	4	1	0	0	29	17	0	7	2	27
Average per centage of sick to strength.	67 ·416	0·013	0·169	0·088	0·047	1·848	0·020	3·587	2·650	0	4·777	0·523	16·172
Do. of deaths to sick treated.	2 ·056	50·000	12·000	30·769	14·285	0	0	5·492	4·358	0	0·995	2·597	1·134
Do. per centage of deaths to strength.	1 ·386	0·006	0·020	0·027	0·006	0	0	0·196	0·115	0	0·047	0·013	0·183

	Diseases.												
	,, remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & injuries.	Other Complaints.
Aggregate strength. 14,716													
1829 to 1838. Admitted. 1st half.	114	2	11	9	2	42	611	10	361	74	1	423	1335
1829 to 1838. Admitted. 2d ,,	47	3	10	5	0	30	497	10	253	71	0	334	1266
Total..	161	5	21	14	2	72	1108	20	614	145	1	757	2601
Died...... 1st half.	0	0	1	1	0	0	12	0	2	5	0	3	35
Died...... 2d ,,	1	0	1	0	0	0	9	1	5	10	0	0	27
Total..	1	0	2	1	0	0	21	1	7	15	0	3	62
Average per centage of sick to strength.	1·094	0·033	0·142	0·095	0·013	0·489	7·259	0·135	4·172	0·985	0·006	5·144	17·674
Do. of deaths to sick treated.	0·621	0	9·523	7·142	0	0	1·895	5·000	1·140	10·344	0	0·396	2·383
Do. per centage of deaths to strength.	0·006	0	0·013	0·006	0	0	0·142	0·006	0·047	0·101	0	0·020	0·421

TENASSERIM COAST.

No. 5.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

EUROPEAN TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 4379. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions and deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
Fevers......	Febris ephemera	19	1	19	0								
	,, intermit quot.	11	0	182	5								
	,, tertiana......	4	0	72	0	619	13	795	16	1414	29	32 ·290	2 ·050
	,, remittens.....	14	1	37	5								
	,, continua......	568	11	485	6								
	Cholera	25	14	9	2	25	14	9	2	34	16	0 ·776	47 ·058
Diseases of the Abdominal viscera.......	Dysenteria acuta	187	21	329	39	205	26	389	58	594	84	13 ·564	14 ·141
	,, chronica......	18	2	60	19								
	Diarrhœa.......	313	2	352	6								
	Colica..........	41	0	60	0								
	Obstipatio.......	55	0	61	0								
	Hæmorrhois....	26	0	22	0								
	Enteritis........	2	1	0	0	513	3	546	8	1059	11	21 ·183	1 ·038
	Peritonitis......	1	0	1	0								
	Gastritis........	6	0	3	1								
	Dyspepsia.......	69	0	47	1								
	Hepatitis acuta.	85	1	72	3								
	,, chronica......	58	2	53	3	143	3	125	6	268	9	6 ·120	3 ·358
Diseases of the Lungs and Heart	Catarrhus	96	1	128	3								
	Asthma.........	4	0	1	0								
	Phthisis pulmonalis..........	2	1	3	1								
	Hœmoptysis.....	1	0	0	0								
	Pleuritis.........	0	0	0	0	125	4	158	8	283	12	6 ·462	4 ·240
	Pneumonia......	9	1	13	3								
	Carditis	1	0	1	0								
	Palpitatio	8	0	6	0								
	Dyspnœa	4	1	6	1								
Diseases of the Brain.	Apoplexia......	1	1	0	0								
	Epilepsia.......	10	0	3	0								
	Paralysis.......	1	t	4	0								
	Cephalalgia	54	1	35	0								
	Phrenitis........	0	0	0	0								
	Ictus solis......	0	0	0	0								
	Amentia........	0	0	0	0	104	4	64	0	168	4	3 ·836	2 .380
	Mania..........	3	0	1	0								
	Hydrophobia...	0	0	0	0								
	Delirium Tremens.........	10	2	6	0								
	Ebrietas.........	25	0	15	0								
Diseases of the Eye..	Morbi oculorum...........	40	0	50	0	40	0	50	0	90	0	2 ·055	0
Do. ,, Skin	,, cutis........	21	0	18	0	21	0	18	0	39	0	0 ·890	0
Eruptive Fevers......	Variola.........	2	0	1	0								
	Varicella........	0	0	0	0								
	Rubeola........	0	0	1	0	3	0	3	0	6	0	0 ·137	0
	Scarlatina......	0	0	0	0								
	Erysipelas.......	1	0	1	0								
Dropsies....	Anasarca.......	0	0	6	1								
	Ascites.........	1	0	13	5	2	0	21	7	23	7	0 ·525	30 ·434
	Hydrothorax....	1	0	2	1								
Rheumatic affection.	Rheumatismus acutus........	97	1	122	1								
	,, chronicus....	69	1	93	0								
	Neuralgia	0	0	0	0	168	2	216	1	384	3	8 ·769	0 ·781
	Odontalgia......	2	0	1	0								
Venereal affection....	Syphilis primitiva...........	67	0	89	0								
	,, consecutiva...	10	1	6	1								
	Gonorrhœa.....	164	1	118	0								
	Hernia humoralis...........	54	0	52	0	295	2	269	1	564	3	12 ·879	0 ·531
	Strictura urethræ..........	0	0	4	0								
Specific diseases.....	Atrophia........	0	0	0	0								
	Beriberi.........	0	0	0	0								
	Elephantiasis...	0	0	0	0								
	Lepra..	0	0	0	0								
	Dracunculus....	0	0	0	0	17	(	13	0	30	0	0 ·685	0
	Ulcus phagedenicum.........	4	0	2	0								
	Scrophula......	7	0	8	0								
	Scorbutus......	6	0	3	0								
Punishment.	Punitus........	30	0	20	0	30	0	20	0	50	0	1 ·141	0
Wounds and injuries...	Fractura........	12	0	3	0								
	Luxatio.........	8	0	2	0								
	Subluxatio......	33	0	30	0								
	Vulnus sclopitorum........	2	1	4	0	264	1	270	1	534	2	12 ·191	0 ·374
	,, incisum......	60	0	69	1								
	Contusio	141	0	149	0								
	Ambustio	8	0	13	0								
Other diseases, including Phlogosis, Ulcus, &c............		421	3	578	11	421	3	578	11	*999	†14	22 ·813	1 ·401
	Total.......	2995	75	3544	119	2995	75	3541	119	6539	194	149 ·326	2 ·966

Average per centage of deaths to strength during these five years, has been 4·430.

* Of this number were

Phlogosis...............	256 0
Do. Do. Ulcus.........	329 0
Do. Do. Bubo simplex.	154 0
Total.......	739 0

† The deaths under this head include one from cynanche, one from icterus, and twelve under the head "other diseases," not particularised.

TENASSERIM COAST.

No. 6.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, for 5 years.*

NATIVE TROOPS.

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength. 6955				Admissions and deaths from each class of disease.				Totaladmissions from each class.	Total deaths from each class.	Average per centage of sick to strength.	Average per centage of deaths to sick.
		1st Half.		2d. Half.		1st Half.		2d. Half.					
		Ad.	Dd.	Ad.	Dd.	Ad.	Dd.	Ad.	Dd.				
Fevers......	Febrisephemera	309	2	197	5								
	,, intermit.quot.	125	3	124	5								
	,, tertiana	28	0	72	0	533	5	432	11	965	16	13 ·874	1 ·6
	,, remittens.....	63	0	24	1								
	,, continua.....	8	0	15	0								
	Cholera........	0	0	0	0	0	0	0	0	0	0	0	
Diseases of the Abdominal viscera......	Dysenteriaacuta	60	1	44	4								
	,, chronica......	9	4	15	3	69	5	59	7	128	12	1 ·840	9 ·37
	Diarrhæa.......	100	5	96	10								
	Colica..........	32	0	7	0								
	Obstipatio......	6	0	16	0								
	Hœmorrhois....	12	1	13	0	178	10	185	12	363	22	5 ·219	6 ·
	Enteritis.......	0	0	0	0								
	Peritonitis.	0	0	0	0								
	Gastritis.......	0	0	0	0								
	Dyspepsia......	28	4	53	2								
	Hepatitis acuta.	0	0	2	0								
	,, chronica......	1	0	1	1	1	0	3	1	4	1	0 ·057	25
Diseases of the Lungs and Heart	Catarrhus......	30	1	26	2								
	Asthma	16	0	11	1								
	Phthisis pulmonalis..........	2	2	4	2								
	Hœmoptysis....	1	1	1	0								
	Pleuritis........	0	0	0	0	55	5	46	5	101	10	1 ·452	9 ·90
	Pneumonia.....	0	0	1	0								
	Carditis.........	0	0	0	0								
	Palpitatio	1	0	0	0								
	Dyspnœa.......	5	1	3	0								
Diseases of the Brain.	Apoplexia.	0	0	0	0								
	Epilepsia	1	0	0	0								
	Paralysis........	3	0	1	0								
	Cephalalgia	13	2	7	0								
	Phrenitis.......	0	0	0	0								
	Ictus solis..	0	0	0	0								
	Amentia.	1	1	2	0	22	3	12	0	34	3	0 ·488	8 ·823
	Mania..	1	0	2	0								
	Hydrophobia ..	0	0	0	0								
	Delirium Tremens.........	3	0	0	0								
	Ebrietas........	0	0	0	0								
Diseases of the Eye..	Morbi oculorum	12	0	4	0	12	0	4	0	16	0	0 ·230	0
Do. Skin.	,, cutis......	187	0	85	0	187	0	85	0	272	0	3 .910	0
Eruptive fevers......	Variola.........	3	0	9	1								
	Varicella.	7	0	1	0								
	Rubeola........	0	0	3	0	11	0	13	1	24	1	0 ·345	4 ·166
	Scarlatina......	0	0	0	0								
	Erysipelas.	1	0	0	0								
Dropsies....	Anasarca........	5	3	7	4								
	Ascites.........	1	0	0	0	6	3	7	4	13	7	0 ·186	53 ·846
	Hydrothorax...	0	0	0	0								
Rheumatic affections.	Rheumat acutus	134	4	109	3								
	,, chronicus	118	3	114	2								
	Neuralgia.......	0	0	0	0	255	7	224	5	479	12	6 ·887	2 ·505
	Odontalgia... ..	3	0	1	0								
Venereal affections..	Syphilis primitiva..........	19	0	34	1								
	,, consecutiva	8	1	9	0								
	Gonorrhœa.....	25	0	18	1								
	Hernia humoralis..........	26	0	19	0	114	1	80	2	194	3	2 ·789	1 ·546
	Strictura urethræ.........	6	0	0	0								
Specific diseases.....	Atrophia.	8	0	7	2								
	Beriberi........	5	2	8	2								
	Elephantiasis...	0	0	0	0								
	Lepra..........	2	0	0	0								
	Dracunculus....	2	0	3	0	21	2	22	4	43	6	0 ·618	13 ·953
	Ulcus phagedenicum........	1	0	0	0								
	Scrophula......	3	0	4	0								
	Scorbutus......	0	0	0	0								
Punishment	Punitus.........	6	0	4	0	6	0	4	0	10	0	0 ·143	0
Wounds and injuries ..	Fractura........	3	0	1	0								
	Luxatio	1	0	1	0								
	Subluxatio	12	0	6	0								
	Vulnus sclopitorum..........	1	0	0	0	159	1	134	0	293	1	4 ·212	0 ·341
	,, incisum......	37	0	21	0								
	Contusio.......	91	1	99	0								
	Ambustio......	14	0	3	0								
Other diseases, including Phlogosis, Ulcus, &c............		312	4	275	2	312	4	275	2	*587	†6	8 ·439	1 ·022
Total....		1941	46	1585	54	1941	46	1585	54	3526	100	50 ·697	2 ·836

Average per centage of deaths to strength during these five years, has been 1·437.

* Of this number were

Phlogosis...............	245	1
Do. Do. Ulcus.......	236	1
Do. Do. Bubo simplex.	52	0
Total.....,	533	2

† The deaths under this head, include, besides those in the preceding note, one from cynanche, one from diabetes, one from icterus, and one not particularized.

TENASSERIM PROVINCES.

No. 7.—Table exhibiting the admissions and deaths from the most particular diseases, amongst the European and Native Troops, in the Tenasserim Provinces, during the ten years, from 1829 *to* 1838 *inclusive, with the proportion each bears to the total number of Admissions and Deaths.*

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these compts	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Europeans.																		
Total Admissions 13,046	36	1/362	3568	2/7	1404	1/9	541	1/24	897	2/29	610	1/21	550	1/24	906	1/14	8512	2/3
„ Deaths 340	17	1/20	68	1/5	125	1/3	29	1/12	13	1/31	24	1/14	6	1/57	4	1/85	286	5/6
Natives.																		
Total Admissions 9,921	7	1/1417	3321	1/3	390	1/25	21	1/472	528	1/19	145	1/68	1108	1/30	614	1/16	6134	2/3
„ Deaths 204	1	1/204	37	2/11	17	1/12	2	1/102	29	1/7	15	2/27	21	1/10	7	1/29	129	3/5

No. 8.—*Table shewing the per centage of admissions from the same diseases to the strength, of deaths to sick treated, and of deaths to the strength: it exhibits also the difference in these respects, amongst the European and Native sick.*

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.		Grand total.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 9,092.																				
Per centage of sick to strength	36	0·395	3568	39·243	1404	15·442	541	5·950	897	9·865	610	6·709	550	6·049	906	9·964	8512	93·627	13046	143·488
„ of deaths to sick treated.	17	47·222	68	1·905	125	8·903	29	5·360	13	1·449	24	3·934	6	1·090	4	0·441	286	3·359	340	2·606
„ of deaths to strength. . .	17	0·186	68	0·747	125	1·374	29	0·318	13	0·142	24	0·263	6	0·065	4	0·043	286	1·345	340	3·739
Native Troops. STRENGTH, 14,716.																				
Per centage of sick to strength	7	0·047	3321	22·567	390	2·650	21	0·142	528	3·587	145	0·985	1108	7·529	614	4·172	6134	41·682	9921	67·419
„ of deaths to sick treated.	1	14·285	37	1·114	17	4·358	2	9·523	29	5·492	15	10·344	21	1·895	7	1·140	129	2·102	204	2·056
„ of deaths to strength. . .	1	0·006	37	0·251	17	0·115	2	0·013	29	0·196	15	0·101	21	0·142	7	0·047	129	0·876	204	1·386

TENASSERIM PROVINCES.

No. 9.—*Table shewing the amount of Admissions and Deaths from the principal classes of disease during five years, from 1834 to 1838 inclusive, with the proportion of Admissions from each to the total of sick treated, and of deaths to the total mortality.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																				
Total Admissions.... 6,539	1414	$\frac{2}{9}$	34	$\frac{1}{192}$	594	$\frac{1}{11}$	1059	$\frac{1}{6}$	268	$\frac{1}{24}$	283	$\frac{1}{23}$	168	$\frac{1}{39}$	23	$\frac{1}{284}$	384	$\frac{1}{17}$	564	$\frac{2}{23}$
„ Deaths........ 194	29	$\frac{1}{7}$	16	$\frac{1}{12}$	84	$\frac{4}{9}$	11	$\frac{1}{18}$	9	$\frac{1}{22}$	12	$\frac{1}{16}$	4	$\frac{1}{48}$	7	$\frac{1}{28}$	3	$\frac{1}{65}$	3	$\frac{1}{65}$
Native Troops.																				
Total Admissions ... 3,526	975	$\frac{2}{7}$	0	0	128	$\frac{1}{28}$	363	$\frac{4}{39}$	4	$\frac{1}{881}$	101	$\frac{1}{35}$	34	$\frac{1}{104}$	13	$\frac{1}{271}$	479	$\frac{1}{7}$	194	$\frac{1}{18}$
„ Deaths........ 100	16	$\frac{1}{6}$	0	0	12	$\frac{1}{8}$	22	$\frac{2}{9}$	1	$\frac{1}{100}$	10	$\frac{1}{10}$	3	$\frac{1}{33}$	7	$\frac{1}{14}$	12	$\frac{1}{8}$	3	$\frac{1}{33}$

No. 10.—*Table exhibiting the per centage of Admissions from the same classes of disease to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 4379.																				
Per centage of sick to strength	1414	32·290	34	0·776	594	13·564	1059	24·183	268	6·120	283	6·462	168	3·836	23	0·525	384	8·769	564	12·879
„ of deaths to sick.....	29	2·050	16	47.058	84	14·141	11	1·038	9	3·358	12	4·240	4	2·380	7	30·434	3	0·781	3	0·531
„ of deaths to strength..	29	0·662	16	0.365	84	1·918	11	0·251	9	0·205	12	0·264	4	0·091	7	0·159	3	0·068	3	0·068
Native Troops. STRENGTH, 6955.																				
Per centage of sick to strength	965	13·874	0	0	128	1·840	363	5·219	4	0·057	101	1·452	34	0·488	13	0·186	479	6·887	194	2·789
„ of deaths to sick.....	16	1·658	0	0	12	9·375	22	6·060	1	25·000	10	9·901	3	8·823	7	53·846	12	2·505	3	1·546
„ of deaths to strength..	16	0·230	0	0	12	0·172	22	0·316	1	0·014	10	0·143	3	0·043	7	0·100	12	0·172	3	0·043

MOULMEIN.

No. 13.—*Table exhibiting the sickness and mortality amongst the* OFFICER'S *of H. M.'s regiments at Moulmein, from* 1829 *to* 1840, *exclusive of* 1833 *and* 1834.

Aggregate strength. 325. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris intermit. quotid........	11	0	92	4	28 ·307	4 ·347
	,, remitteus.	12	1				
	,, com. cont.	69	3				
	Cholera.........	0	0	0	0	0	0
Diseases of the abdominal viscera......	Diarrhœa......	23	0	91	1	28 ·000	1 ·098
	Dysenteria.....	19	1				
	Obstipatio......	15	0				
	Dyspepsia......	34	0				
	Hepatitis........	26	2	26	2	8 ·000	7 ·692
Diseases of the lungs.	Catarrhus......	31	0	34	0	10 ·461	0 ·000
	Asthma.........	2	0				
	Pneumonia.....	1	0				
Diseases of the brain.	Paralysis.......	1	0	2	1	0 ·615	50 ·000
	Mania.........	1	1				
	Anasarca.......	1	1	1	1	0 ·307	100 ·000
	Rheumatismus.	24	0	24	0	7 ·385	0 ·000
Venereal affections..	Syphilis prim..	3	0	31	0	9 ·538	0 ·000
	Gonorrhœa.....	18	0				
	Hernia humoralis...........	8	0				
	Strictura urethræ.........	2	0				
	Morbi oculorum	8	0	8	0	3 ·461	0 ·000
	,, cutis......	2	0	2	0	0 ·651	0 ·000
	Other diseases..	140	0	140	0	43 ·076	0 ·000
	Total....	451	9	451	9	138 ·769	1 ·993

NOTE.—Per centage of deaths to strength, 2·775.

MOULMEIN.

No. 14.—*Table exhibiting the sickness and mortality amongst the WOMEN of H. M.'s regiments at Moulmein, from* 1829 *to* 1840, *exclusive of* 1833 *and* 1834.

Aggregate strength 788. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fever......	Febris intermit quotid.	17	0	205	1	26 ·015	0 ·487
	,, remittens	20	0				
	,, com. cont....	168	1				
	Cholera	1	0	1	0	0 ·126	0 ·000
Diseases of the abdominal viscera.....	Diarrhœa	63	4	204	10	25 ·889	4 ·901
	Dysenteria......	46	6				
	Colica..........	14	0				
	Dyspepsia..... ..	18	0				
	Obstipatio......	59	0				
	Splenitis........	1	0				
	Gastritis........	2	0				
	Peritonitis......	1	0				
	Hepatitis..	20	0	20	0	2 ·538	0 ·000
Diseases of the Lungs	Catarrhus......	24	2	29	2	3 ·682	6 ·895
	Asthma........	4	0				
	Pneumonia.....	1	0				
Diseases of the Brain.	Apoplexia......	1	1	4	3	0 ·507	75 ·000
	Epilepsia.......	1	0				
	Hysteria........	1	1				
	Tetanus........	1	1				
	Erysipelas......	1	0	1	0	0 ·126	0 ·000
	Rheumatismus.	8	0	8	0	1 ·015	0 ·000
Peculiar diseases..	Amenorrhœa...	1	0	65	1	8 ·248	1 ·538
	Menorrhagia....	3	0				
	Abortio	2	1				
	Prolapsus uteri.	1	0				
	Parturitio......	58	0				
	Morbi oculorum	10	0	10	0	1 ·269	0 ·000
	,, cutis......	2	0	2	0	0 ·253	0 ·000
	Other diseases..	94	1	94	1	11 ·928	1 ·063
	Total....	643	18	643	18	81 ·598	2 ·799

NOTE.—Per centage of deaths to strength, 2·[illegible]81.

MOULMEIN.

No. 15.—*Table exhibiting the sickness and mortality amongst the* CHILDREN *of H.M.'s regiments at Moulmein, from* 1829 *to* 1840, *exclusive of* 1833 *and* 1834.

Aggregate strength 9)8. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris intermit quotid........	8	0	147	10	16 ·189	6 ·530
	,, remittens.	40	10				
	,, com. con..	99	0				
	Cholera........	0	0	0	0	0	0
Diseases of the abdominal viscera......	Diarrhœa.......	128	9	178	20	19 ·603	11 ·235
	Dysenteria.....	36	8				
	Obstipatio......	4	0				
	Marasmus......	5	2				
	Colica..........	4	0				
	Enteritis.......	1	1				
	Hepatitis.......	1	0	1	0	0 ·110	0 ·000
Diseases of the lungs.	Cynanche......	3	0	55	2	6 ·057	3 ·636
	Catarrhus......	48	0				
	Pneumonia.....	4	2				
	Convulsio.......	18	17	18	17	1 ·982	24 ·444
	Varicella.......	1	0	1	0	0 ·110	0 ·000
	Dentitio........	5	1	36	3	3 ·964	8 ·333
	Vermes........	31	2				
	Morbi oculorum	19	0	19	0	2 ·092	0 ·000
	,, Cutis......	12	0	12	0	1 ·321	0 ·000
	Other diseases..	51	2	51	2	5 ·616	3 ·921
	Total....	518	54	518	54	57 ·048	10 ·424

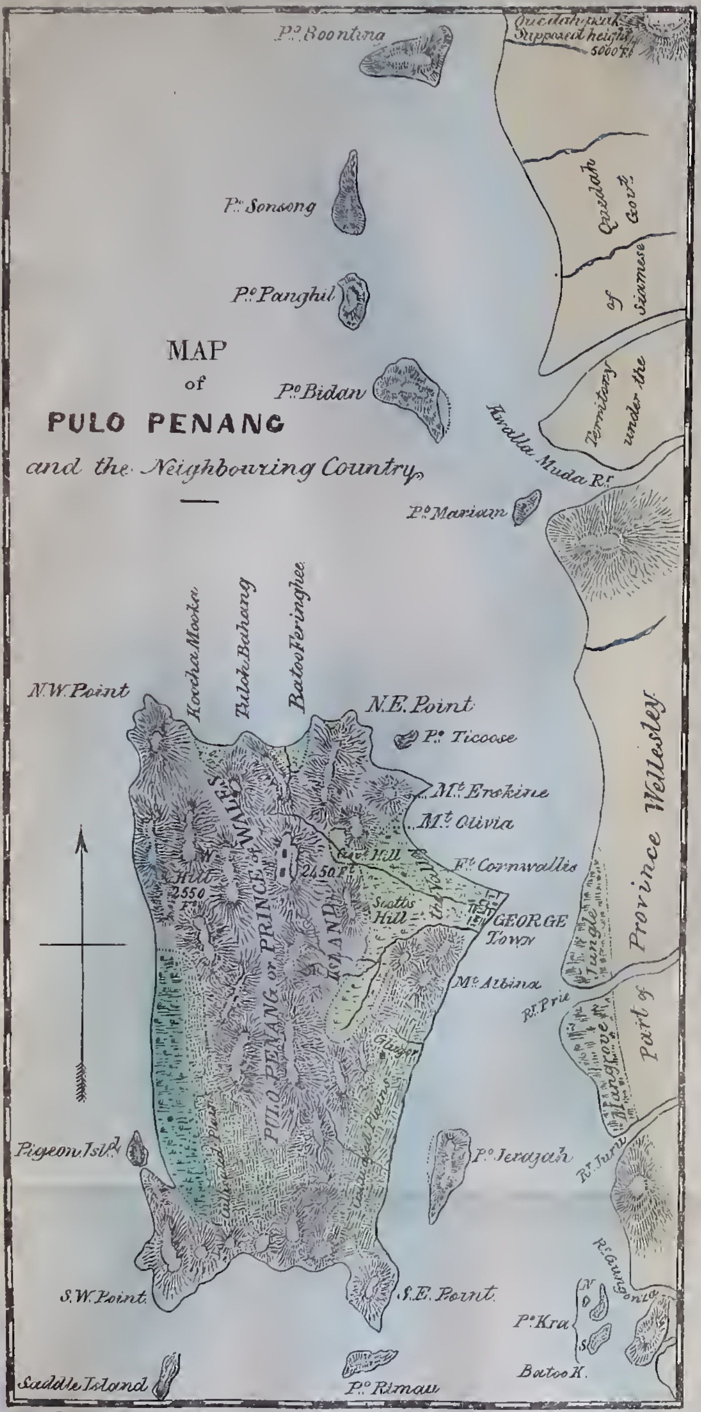
NOTE.—Per centage of deaths to strength, 5·947.

PENANG.

General description. Prince of Wales island, or Pulo-Penang, as it is called by the Malays, is situated between 5° 15″, and 5° 29″, of north latitude, and in 100° 19″ east longitude. This island was transferred to the Honorable East India company in 1786, by the king of Queddah, through Mr. Light, master of a country vessel; at which time it is said to have been entirely covered with jungle, and destitute of inhabitants, with the exception of a few Malays, who gained a livelihood by fishing. After the cession of Penang to the British, persons from the neighbouring countries, attracted by the encouragement held out to settlers, and the inducement of living under a mild and just government, by which their property would be secured, flocked to the place in considerable numbers.

This beautiful island, which is clothed with perpetual verdure, is separated from the Malayan peninsula by a strait, at its narrowest part, about 2 miles in breadth; it is in shape pentagonal, the two longest sides are of pretty equal length, running nearly north and south,—its greatest length is 16 miles, from north to south, and its greatest breadth 12 miles, containing 165 square miles, of which a considerable portion is under cultivation, and the rest covered with thick and lofty jungle.

The island is divided into two nearly equal portions, by a high chain of hills, running from north to south, with low flat land on either side, the chain being most elevated to the northward, and decreasing in height toward the southward. The plain, on the eastern side of the hills, is the most thickly inhabited part, and at the most eastern part of it stands, Fort Cornwallis, some of the outworks of which have at different times, been undermined by the sea.



Madras Lith. Press.

B.C. Regel. delt.

Population. The annexed table, shews the extent of the population in 1839, when it amounted to 40,242 souls.

Census of the Population of the Prince of Wales Island or Pulo-Penang, in 1839.

DISTRICTS.	Europeans.	Descendants of Europeans and Native christians.	Armenians.	Jews.	Malays & Bugis.	Achinese.	Battas.	Chulias.	Chinese.	Bengalies.	Burmese and Siamese.	Arabs.	Parsees.	Coffrees.	Total.
George Town..................	73	682	29	16	2,904	0	35	3,231	3,919	365	28	28	9	68	11,417
Telick Ayer Raja........	0	465	0	0	4,276	143	61	1,391	1,379	645	592	35	0	57	9,039
Selutong........................	0	14	0	0	2,856	13	13	1,175	1,537	131	46	49	0	5	5,890
Glugore including Pulo-Jerango	0	4	0	0	1,975	0	12	491	495	19	22	29	0	22	3,069
Tungei Kluang...................	0	0	0	0	4,812	155	101	147	973	2	12	0	0	9	6,211
Western District................	0	0	0	0	1,869	14	141	21	6[illegible]8	0	11	0	0	0	2,674
	73	1,165	29	16	18,692	325	363	6,456	8,997	1,162	711	141	9	161	38,300
In the Chinese poor house 39, Pauper Hospital 25, Lunatic Asylum 22...............															86
Convicts from Continental India 786. Local Prisoners, and Debtors 70.............															856
Itenerants of various classes..															1,000
Grand Total........															40,242

The Artillery to the number of 50 or 60 are quartered in the fort, and accommodated in good barracks, built upon the ramparts; and in it also, is an arsenal, with a powder magazine.

To the south-west along the shore extends George town, and about 6 miles further south, is a small collection of native huts, to which the name of James' town has been given. To the westward of the fort, extending for about a mile and a half along the beach, there is a succession of good houses, inhabited by the military and gentry resident on the island. At about 150 yards from the fort, is the hospital for the European artillery, calculated to contain 14 beds, the sick occupy the upper story, the lower part of the building being used as a gun shed ; a good ward on the ground floor, is also allotted for the sick of the golundauze.

Immediately adjoining, are the barracks of the golundauze, built of brick and chunam, with tiled roofs, and furnished with wooden sleeping trestles.

Na'ive infantry lines. About $2\frac{1}{4}$ miles to the N. W., are the sepoy lines, capable of accommodating a complete native regiment, situated in a large open space, which in fair weather, is dry and healthy,but becomes somewhat swampy during the rains. The huts are neatly arranged in parallel rows, with a sufficient distance between them ; they are built of the atap leaf, and have hitherto been erected at the expense of government.

Native infantry hospital. To the rear of the lines is the regimental hospital, a good two storied building; the upper story, which consists of a long centre room, with two smaller ones on each side, is occupied by the sick; the length of the building is 55 feet, breadth 38, and the wards can contain about 80 beds. On the ground flour are the dispensary, and bathing rooms. The situation is good, being a slightly raised and dry spot, and the space around is well cleared and open.

Government hill. Proceeding about two miles to the north-west, the road commences, by which the great hill, or "government hill" as it is called, is ascended, it is about three miles iu

length,and is wide but steep ; and invalids,who frequently resort to the hill for the benefit of change to a cool and bracing climate,can be carried up in a chair by coolies,in about an hour and a half ; but on horseback much less time is required. On the summit of the hill, nearly 2500 feet above the level of the sea, and the highest inhabited spot on the island, are four bungalows, two of which are the property of government, the larger being the residence of the governor of the straits, on his occasional visits to this station ; and the other is available to be rented by invalids. Bungalows have also been built on some of the lesser hills, but of these two or three have been abandoned, in consequence of the mortality from fever,which occurred in families formerly residing there ; the others are still occasionally occupied,and generally considered healthy.

Cultivation of land.

The hills appear to be of primitive formation, consisting almost entirely of a fine grey granite, the debris of which, combined with decomposed vegetable matter, composes the soil of the low lands, which, with the exception of some swampy patches of mangrove, are mostly under cultivation ; the parts inundated during the rains, are laid out as rice grounds, the rest chiefly for rearing spices, for which both climate and soil have been found to be well adapted.

Water.

Good water is procurable in all parts of the island, a few feet from the surface, except in very dry seasons ; and also, from excellent springs at the foot of the hills.

Botanical productions.

The botany of the island has not yet been fully investigated, though it would well repay the labour and risk attending its examination, particularly in ferns and parasitical plants,which are extremely abundant; of the great variety of trees met with,many are much prized by the natives, on account of the various uses to which they are applied. Fruit can be obtained in great abundance at all seasons of the year, among the best kinds of which may be enumerated, the mangoosten, ramboosten, oranges, jack fruit, the tampoone, ramboi, doorian, and many others.—Pine apples grow wild,

covering large patches of ground, and are considered to be of peculiarly fine flavour.

Insects. The entomology seems exceedingly rich, and this department of natural history, would probably yield a richer harvest than any other in the island. Large collections have of late been made by several individuals, attracted by the great beauty and variety, more especially of the lepidopterous insects, to be met with ; but they have not it is believed, been yet scientifically arranged, or described.

Animals. The indiginous animals are but few in number ; —the malayan elk, a diminutive species of deer, with some varieties of the quadrumana, a few species of the squirrel tribe, and some few other unimportant animals, constitute the mammalia to be met with.

Climate and its effects upon health. The peculiar position of Penang, its insular situation and local features, combine to render the climate essentially different from that of all other Indian stations. It is comparatively but little influenced by the causes which produce the regularity of the seasons, throughout our other eastern possessions.

The moonsoons, though felt to a certain extent, are not ushered in by the great changes elsewhere observed, which seems to be owing in some measure, to the influence which the island of Sumatra, and the peninsula of Malacca exercise, in changing the direction of the currents of air. Whatever may be the cause, the distinction between the dry and rainy seasons, is but imperfectly marked, for except in unusually dry years, a month does not pass, without more or less rain, and the excessively humid atmosphere, conjoined with great heat, renders the climate relaxing and enervating.

The ground is kept constantly covered with water by the heavy rains, and it is perhaps owing to this circumstance, that malignant fevers seldom occur, though some parts of the island, more especially in the vicinity of the hills, are pro-

ductive of fevers, whilst the cultivated and inhabited parts, are exempt from them, but no cases of fever, of a similarly fatal character to that described by Dr. Ward, have been seen for some years past.

The quantity of rain varies much in different years, and usually ranges from 60, to 90 inches, January and February being the driest months. From the great moisture, and the relaxing effects of the climate, some peculiarities in the diseases of the island are observed; the acute forms of disease of drier localities, not being here seen, and ulcers and other affections, are characterized by a want of action and vigour in the constitution; and even in acute cases, topical depletion is in general sufficient to arrest their course.

The atmosphere is felt to be particularly oppressive, both before and after rain, when the damp heat is to many almost insupportable; and this condition of the air, often alternates with strong squalls, by which the perspiration is checked, causing many of the diseases met with.

The climate is therefore a trying one to the European constitution, from there being no cold season to invigorate the system after the oppresive heat; and in almost all cases, after attacks of severe disease, either a change of climate, or residence on the hill, becomes necessary for recovery.

As the air is always mild, even in the N. E. monsoon, the climate is in many cases, well suited for persons labouring under a diseased or irritable state of the lungs or bronchiæ; though instances are seen, in which coughs are attended with profuse expectoration, arising from a relaxed condition of the mucous membrane. Excessive discharges particularly in European females, from the genito-urinary passages, are likewise met with, arising from the same cause.

The evenings and nights are cool throughout the year, and when the sky is clear, a copious deposition of dew takes place, rendering the air chilly. Fogs so prevalent on the

opposite coast of Province Wellesley, do not occur, except at the base of the hills.

The direction of the winds, as above mentioned, is very irregular, but the westerly is by far the most common. The chain of hills prevents its direct influence on the lower country, and deflects it so much, that at the north end of the island, it becomes a northerly, and at the south, a southerly wind; and were it not that the high land intercepts the sea breeze, the climate would be much more agreeable than it is found to be, a refreshing sea breeze often prevailing on the opposite shore of Province Wellesley, whilst on the island, it is close and oppressive.

The southerly wind is considered to be unhealthy, and is usually excluded from the houses, by the older inhabitants, as much as practicable, but it is fortunately of rare occurrence; during the continuance of this wind the skin feels dry and harsh, headaches, with feverishness and general *malaise* occur; and domestic animals have been known to die in great numbers during its prevalence.

The most refreshing and pleasant wind is the northerly, which blows for four or five months, it veers from north-west to north-east, during the monsoon; on first setting in, it often occasions catarrhs, slight fevers, and rheumatism, but this is certainly the most healthy, and agreeable season of the year; the effect of the north-east monsoon, is usually felt in September, and the south-west as early as March or April.

Circumstances, which formerly influenced the type of disease, there is reason to suppose, have become greatly modified, as at the time Dr Ward's report was written, many tracts of land were undergoing the process of clearing for cultivation, the ground being turned up for the first time, which is believed to be a productive source of miasm. Persons were also more in the habit of residing on, or near the newly cleared lands than at present; experience has also taught the residents, the danger of exposure to the sun, and shooting and boating parties, are now less frequent than formerly.

Prevailing diseases. The most prevalent diseases, are fevers, rheumatism, ulcers and derangement of the intestinal canal. Amongst the native troops, men frequently fall into low spirits, sicken, become emaciated and die, without any appreciable symptom of local disease. In these cases, a longing to return to their native country, is the most marked feature of the complaint.

Fevers. The cases of fever, are usually either ephemeral or quotidian, and fevers of a severe form, have not of late been seen.

Worms. Worms in the intestines, chiefly lumbrici, are very common.

Hepatitis. Cases of hepatitis are rarely met with, and easily subdued.

Rheumatism. Rheumatism is the most important, and intractable disease of the island; and natives of India suffer more from it, than Europeans; in many cases, no benefit has been derived from any mode of treatment, and removal from the climate becomes requisite.

Variola. Variola has occasionally prevailed in a severe form, and from the character of the climate, great difficulty has been experienced in keeping up vaccination, which for some years has not been satisfactorily established.

Dysentery. Acute dysentery is very rare, neither is the chronic form of the disease, nor diarrhœa very common; but when they do occur, they are exceedingly obstinate, recurring on the least neglect of diet or regimen. Ipecacuanha is found a most valuable medicine in these diseases, with leeching, counter irritation by blisters, anodyne enemata, and mineral and vegetable tonics, during convalescence.

Dyspepsia and Hypochondriasis. Dyspepsia and hypochondriasis, are, from the debilitating effects of the climate, of frequent occurrence, and usually require a change of residence.

Hydrocele. The number of natives in the island suffering from hydrocele, is very remarkable; and it is not known whether they employ any remedies for its cure.

Lepra.

Lepra is prevalent among the chinese, and a large number of patients suffering from the disease, are constantly under the treatment of the civil surgeon ; and many others are seen wandering about the island.—The surgeon in charge of these patients, is satisfied that the disease is incurable, and he is strongly of opinion, that it is also contagious.

Ulcers.

Ulcers are always prevalent, more especially amongst troops, in the first year of their residence on the island. They are not now seen in so severe a form, as when first the place was occupied, but are often troublesome and difficult of cure, are very liable to recur from slight causes, and are characterised by debility, and want of tone in the system ; they frequently commence in itch, about the ankles, which runs into sores with rounded, and hardened edges, granulations being either entirely wanting, or the bottom of the sore is sloughy. Ulcers occurring spontaneously, generally commence in some derangement of the subcutaneous cellular tissue,when the person's attention is first attracted by a sensation of pain, itching and slight swelling of the skin, which becomes red, and in the centre of the inflammed part a black spot is observed, which being detached, a small slough is found underneath ; and the pain which is often severe, is relieved after an open sore is formed.

The treatment found most beneficial, has been poulticing at first, with stimulant applications or hot dressings, till the slough is detached ; then slightly stimulant lotions, such as a weak solution of zinci sulphas are used ; and occasionally much benefit is derived from the black wash ; should the slough be of considerable size, touching its edges with strong nitric acid, has proved useful, and in cases where the ulcers become indolent, with round hardened edges, scarifications, blistering and pressure by strapping.

The general health must also be carefully attended to, and alteratives with tonics, stimulants, a liberal allowance of beer and wine, and a generous nutritious diet are the means to be relied on.

No. 16.—*Table exhibiting the sickness and mortality amongst the native troops at Penang from* 1831 *to* 1841, *exclusive of* 1833.

Aggregate strength. 6222. CLASSES.	DISEASES.	Admissions.	Deaths.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	660	3	879	17	14 ·127	1 ·934
	,, intermit quot.	161	5				
	,, tertiana.......	8	0				
	,, remittens.. ..	43	7				
	,, com. cont....	7	2				
	Cholera........	2	0	2	0	0 ·032	0 ·000
Diseases of the abdominal viscera......	Diarrhœa..	160	6	455	14	7 ·312	3 ·076
	Dysenteria.....	19	3				
	Colica..........	14	1				
	Obstipatio......	59	0				
	Hæmorrhois...	5	0				
	Dyspepsia......	198	4				
Diseases of the lungs.	Catarrhus..	229	0	262	4	4 ·210	1 ·526
	Asthma.........	24	2				
	Phthisis pulmo.	4	1				
	Pneumonia.....	5	1				
Diseases of the brain.	Apoplexia..	1	0	23	4	0 ·369	17 ·391
	Epilepsia.......	2	1				
	Paralysis.......	9	2				
	Amentia........	6	0				
	Mania..........	1	0				
	Tetanus........	2	1				
	Ebrietas........	2	0				
Eruptive fevers......	Variola.........	9	0	11	0	0 ·176	0 ·000
	Erysipelas,.....	2	0				
Dropsies....	Anasarca...	34	8	38	12	0 ·610	31 ·578
	Ascites.	4	4				
	Rheumatismus.	439	7	429	7	6 ·891	1 ·631
Venereal affections...	Syphilis prim...	83	0	168	0	2 ·700	0 ·000
	,, consec....	8	0				
	Gonorrhœa.	20	0				
	Hernia humor..	51	0				
	Strictura ureth.	3	0				
Specific diseases.....	Lepra..........	5	0	35	4	0 ·562	11 ·428
	Atrophia.......	23	4				
	Burning of the feet.........	2	0				
	Scrophula......	5	0				
Diseases of the eye...	Morbi oculorum	46	0	46	0	0 ·739	0 ·000
Do. skin..	,, cutis....	463	0	463	0	7 ·441	0 ·000
	Other diseases..	1,544	3	1,544*	3	24 ·815	0 ·194
	Total.....	4,355	65	4,355	65	69 ·993	1 ·492

* Of this number 409 were Phlogosis and 2 deaths; ulcers 727 and 1 death.

NOTE.—Per centage of deaths to strength 1·044.

Meteorological table for Penang, for the year 1836.

	Medium Temperature.			Thermometer. Maximum at			Minimum at			Number of days on which rain fell.	Quantity of rain.	Number of days on which there was thunder.	Number of days on which there was lightning.	Most prevalent winds.	Number of fair days.	Number of cloudy days.	REMARKS.
	6 A. M.	3 P. M.	8 P. M.	6 A. M.	3 P. M.	8 P. M.	6 A. M.	3 P. M.	8 P. M.								
January ..	$74\frac{2}{3}$	$83\frac{1}{2}$	80	76	86	82	74	79	75	7	$4.8\frac{1}{2}$	2	5	N. & W.	24	7	Generally cool and pleasant.
February.	75	$85\frac{2}{3}$	$81\frac{1}{4}$	75	87	84	74	84	79	1	$2.8\frac{1}{2}$	1	1	N. & W.	28	1	Warm with a want of rain.
March....	$74\frac{2}{3}$	$83\frac{5}{6}$	$72\frac{2}{3}$	76	87	82	74	78	74	11	$9.7\frac{3}{4}$	14	22	N. E. & W.	20	11	First half of the month fair, the latter squally from the N.E.
April.....	$75\frac{1}{3}$	87	$77\frac{1}{5}$	77	$88\frac{1}{2}$	86	75	84	76	12	$6.1\frac{1}{4}$	12	12	N. & E.	18	12	Weather very changeable and uncertain.
May......	$74\frac{2}{3}$	$87\frac{1}{10}$	$82\frac{1}{3}$	77	89	86	75	85	79	6	$5.\ \frac{1}{2}$	4	7	N. & W.	25	6	A drier month than it usually is.
June	$75\frac{1}{10}$	$83\frac{5}{6}$	$80\frac{1}{5}$	76	89	82	75	77	76	7	6. 6	5	11	N. & W.	24	6	
July......	$74\frac{2}{3}$	84	$80\frac{1}{3}$	76	87	84	$73\frac{1}{2}$	75	76	14	$12.4\frac{3}{4}$	1	2	N. & W.	19	12	
August..	$74\frac{5}{6}$	$84\frac{1}{2}$	$78\frac{1}{10}$	76	87	82	74	82	75	10	$9.0\frac{3}{4}$	2	2	N. & W.	20	11	Very changeable weather.
Sept.	75	$83\frac{1}{10}$	81	76	87	82	74	78	78	6	8. 1	0	0	S. & W.	24	6	
October...	$74\frac{1}{2}$	$83\frac{1}{6}$	75	77	86	81	73	78	76	15	$11.1\frac{1}{4}$	4	6	N. & W.	16	15	Cool and agreeable.
November	$74\frac{1}{3}$	$83\frac{1}{10}$	$78\frac{2}{3}$	75	86	80	73	75	76	18	$14.9\frac{3}{4}$	3	4	N. & W.	12	18	
December	$75\frac{3}{10}$	85	$80\frac{2}{3}$	76	87	83	74	77	77	5	$3.4\frac{1}{2}$	0	0	N. & W.	26	5	A warm and dry month.
	$74\frac{1}{2}$	$84\frac{1}{5}$	$79\frac{1}{4}$	77	89	86	73	77	74	122	$94.4\frac{1}{2}$	48	72		256	110	
Average of the year.		$79\frac{1}{11}$			84			74									

N. B. These observations were made on the northern beach, at a few feet above the level of the sea.

Fall of rain for four years, on the northern road, Penang.

		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	1833	0 ·9	3 ·8½	1 ·9½	5 ·4½	3 ·2½	9·7½	3 ·9	6 ·3	6 ·1¾	10 ·6½	5 1¼	5 ¼	62 ·3¾
	1835	5 ·9¼	2 ·4	6 ·1	6 ·6	7 ·5	4 · 8	6 ·7¾	10 ·6	12 ·9½	13 ·4½	9 ¼	3 ·4¼	83 ·6¼
	1836	4 ·8½	2 ·8½	9 ·7¾	6 ·1¼	5 ½	6 ·6	12 ·4¾	9 ¾	8 ·1	11 ·1¼	14 ·9¾	3 ·4½	94 ·4½
	1837	1 ·7	1 ·2½	3 ·3	10 ·5¼	2 ·1¾	8 ·6	4 ·2¾	14 ·8½	11 ·8	14 ·2½	6 ·1¼	4 ·9¼	83 ·7¾
Average..		3 ·3	2 ·5	5 ·2	7 ·1	4 ·4	7 ·4	6 ·8	10 .2	9 ·5	12 ·3	8 ·8	4 ·2	82

Return of sick in the convict hospital at Penang, for 1837 and 1838.

	1837.												1838.											
	1st Quarter.			2d Quarter.			3d Quarter.			4th Quarter.			1st Quarter.			2d Quarter.			3d Quarter.			4th Quarter.		
Average number of convicts.	904.			919.			937.			934.			909.			921.			928.			916.		
DISEASES.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.	Admitted.	Discharged	Died.
Apoplexy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asthma	0	0	0	1	1	0	0	0	0	1	0	0	1	1	0	1	1	0	0	0	0	3	2	0
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhœa	1	1	0	1	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0
Dropsy	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Dysentery	4	1	2	1	1	0	1	0	1	2	2	0	2	1	0	6	1	2	8	1	3	7	5	0
Dysuria	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Dislocation and sprain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fracture	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	1	0	0	0	0
Fever. Continued	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Fever. Intermittent	17	15	1	24	23	0	17	16	0	21	18	0	20	16	1	15	10	1	26	22	0	38	31	1
Fever. Remittent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatic affections. Hepatic acute	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Hepatic affections. " chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatic affections. Icterus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inflammation. Thoracic	2	2	0	1	1	0	2	0	1	3	2	1	2	0	1	1	0	1	0	0	0	1	0	1
Inflammation. External	7	6	0	4	2	0	3	1	0	5	5	0	5	4	0	1	1	0	7	4	0	7	4	0
Inflammation. Enteritic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophthalmia. Acute	2	0	0	3	2	0	2	2	0	3	2	0	3	3	0	3	2	0	1	1	0	3	2	0
Ophthalmia. Chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phthisis Pulmonalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rheumatism	16	10	0	33	31	0	13	9	0	12	9	0	10	7	0	8	5	0	10	5	0	12	8	0
Syphilis	0	0	0	1	0	0	4	1	0	3	2	0	1	0	0	4	3	0	1	1	0	3	2	0
Spleen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Pox	0	0	0	0	0	0	0	0	0	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0
Ulcers	11	4	0	20	1	0	36	27	0	33	21	0	25	19	0	26	13	0	42	27	2	18	12	0
Wounds	7	4	0	7	5	0	11	6	0	9	7	0	9	8	0	13	8	0	14	10	0	10	7	0
Other diseases	26	17	2	31	21	1	29	23	1	14	7	1	23	15	1	22	15	0	24	16	2	19	11	0
Leprosy	8	1	0	8	2	0	9	2	1	10	0	0	11	0	0	11	0	0	12	0	1	11	1	2
Total	101	61	5	137	92	2	127	87	4	118	75	2	118	79	4	112	63	4	148	89	8	134	90	4
Average number of sick per 100	8			11			9			2			8			8			11			9		
Average number of deaths to sick per cent.	3			1 2/3			3			1 2/3			3 1/3			3 4/7			5 1/2			3		

The discrepancies which may be observed in this table, are owing to the original column of those who remained in hospital previous to the formation of the table, being omitted.

Return of sick in the native pauper hospital at Penang, for 1837 and 1838.

DISEASES.	1837.																1838.																Remarks.
	1st Qr.				2d Qr.				3d Qr.				4th Qr.				1st Qr.				2d Qr.				3d Qr.				4th Qr.				
	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted.	Discharged.	Died.	Remained.	Admitted,	Discharged.	Died.	
Apoplexy	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	The great mortality observed in the present table, may be accounted for by the size of the native pauper hospital allowing only the admission of patients labouring under disease in its most severe form.
Asthma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diarrhœa	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dropsy	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	
Dysentery	0	1	0	1	0	2	1	1	0	5	1	4	0	1	0	0	1	0	0	1	0	4	1	2	1	2	0	2	1	3	0	3	
Dysuria	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dislocation and sprain	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fracture	0	0	0	0	0	0	0	0	0	2	1	0	1	1	1	0	1	0	1	0	0	1	0	0	1	2	1	0	2	1	2	0	
Mania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fever. Continued	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	0	1	0	
Fever. Intermittent	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	1	0	
Fever. Remittent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hepatic affection. Hepatitis acute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hepatic affection. ,, chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hepatic affection. Icterus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inflammation. Thoracic	0	1	0	1	0	1	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inflammation. External	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
Inflammation. Enteritic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ophthalmia. Acute	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	7	6	0	
Ophthalmia. Chronic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Phthisis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rheumatism	2	2	2	1	1	3	2	0	2	0	2	0	0	1	0	0	1	1	0	0	2	0	1	0	1	2	2	0	1	4	4	0	
Syphilis	0	2	0	0	1	1	1	0	1	3	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Spleen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Small Pox	0	0	0	0	0	1	0	1	0	1	0	0	1	2	2	0	1	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	
Ulcers	26	11	16	6	14	15	11	3	14	18	18	1	13	7	8	0	12	5	7	2	8	9	8	1	8	5	1	1	11	4	6	1	
Wounds	0	2	0	2	0	6	5	1	0	7	2	1	4	5	6	1	2	3	3	0	2	14	10	0	6	5	10	0	1	4	2	1	
Other diseases	13	12	12	4	9	12	6	1	14	13	6	3	18	7	6	8	11	6	3	2	12	5	4	1	12	18	12	2	16	4	8	3	
Leprosy	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Total	43	33	33	16	25	43	27	8	32	55	36	12	39	25	26	9	30	17	16	6	25	36	27	4	30	38	26	7	35	31	32	9	
Average number of deaths to sick per cent.	20				11				14				11				12¾				6¾				16¼				13¼				

Abstract of the weather on the Great Hill, Penang, for the year 1839.

	6 A. M.	3 P. M.	9 P. M.	Medium temperature of the whole month.	Maximum of the month.	Minimum do.	Range during the month.	Greatest daily range.	Least do. do.	Number of days on which thunder and lightning are noted.	Number of days on which rain fell.	Prevailing winds during each month, with the number of days on which it blew in each direction. E.	W.	S.	N.	N. E.	N. W.	S. E.	S. W.	Variable.	Calm.	REMARKS.
January...	67°	72° 1/2	68° 3/4	69° 1/3	75° 1/2	64°	11° 1/2	9°	2°	5	12	13	7	0	2	5	5	0	0	0	0	In the early part hot and oppressive; latterly cool.
February.	68	73	69 1/3	70	75	65 1/2	9 1/2	8	1	6	13	8	7	0	4	4	2	1	1	1	0	Throughout dry and pleasant.
March....	69 2/3	75	70 1/2	71 2/3	77	68	9	9	1	17	15	5	4	4	0	7	4	4	0	3	0	Forenoon and nights sultry and oppressive, occasionally much rain.
April......	70	74 2/3	71	71 2/3	77	67	10	7	2	10	20	0	14	3	0	0	5	4	1	3	0	Variable. F. noon oppressive. Heavy rain at night.
May......	70	74	70 2/3	71 1/3	78	67 1/2	10 1/2	8	2	4	22	0	20	3	0	0	2	4	2	0	0	Squally and rains throughout.
June......	70	74 2/3	71 1/2	71 2/3	77	68	9	7	1	2	12	0	10	8	0	0	2	3	4	3	0	Dry. Nights cool.
July......	68 2/3	72 1/2	69 1/3	70 1/6	76 1/2	66	10 1/2	7	1 1/2	1	15	0	17	2	0	0	5	5	1	1	0	Cool and pleasant. Much rain at night.
August...	68 2/3	73	70	70 1/3	76	66 1/2	9 1/2	7	1 1/2	6	21	0	12	3	0	0	6	3	6	1	0	Do. do. Much rain.
Sept.	69	73	69 2/3	70 1/3	75 1/2	67	8 1/2	6 1/2	1	6	16	0	15	3	0	0	4	4	3	1	0	Cool, cloudy and pleasant.
October...	68	73	69	70	75	63 1/2	11 1/2	7	0	4	25	1	18	0	0	0	8	1	0	3	0	Monsoon weather; much rain; cool.
Nov.......	67	71	68	69	73 1/2	62	11 1/2	8	1	3	19	6	2	2	5	0	6	5	0	3	0	Delightfully cool. Heavy rain at night.
December	67	71	68 1/2	69	73	64	9	8	2	4	13	2	2	3	6	3	9	0	4	2	0	Throughout dry and cool. Morning breeze bracing and refreshing.
Average for the whole year......	68° 1/3	73°	69° 3/4	70°	75°	65°	10°	9°	1 1/4	68	203	35	128	31	17	19	58	31	22	21	0	Medium temperature of the year 70 1/3°

Fall of rain on Government Hill, Penang, for three years

	Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	1835	9·5	0·5½	5 ½	3·9	9·6	7·1½	14·7	15 ½	17·6	19·5	7·6	3·9	114·1
	1836	4	2·2	10·7	2·8	3·9	5·8	12·2	9·7	10·1	15·3	22·9	1·9	101·5
	1837	0·6	1·2	8	17·7	13·2	13·5	3·3	18·4	19·1	19·9	17·4	6·5	138·8
Average..		4·7	1·3	7·8	8·1	8·8	8·8	10	14·3	15·6	18·2	15·9	4·1	118·1

PROVINCE WELLESLEY.

Province Wellesley. The following brief remarks, on Province Wellesley, are chiefly taken from the report of Dr. Ward, published in 1830; since which time, owing to its not being occupied by our troops, except at occasional short intervals, no additional information regarding the country, beyond a census of the population for 1838, has been procured.

This small province, forming part of the Queddah coast, opposite to the island of Penang, was ceded to the British in 1800, by the king of Queddah, and is in length about 30 miles, and breadth 3 miles in-land. It was at that time

covered with jungle, and very thinly inhabited, but has now a population of upwards of 50,000 souls; and there are about 25,000 square acres of land under cultivation, with rice, pepper, sugar, spices, indigo &c.

Climate. Although the strait separating the province from Penang, is but 2½ miles broad, the climate differs materially in some respects, from that of the island; the land and sea breezes are more regular; it is not so much subject to the oppressive calms, and damp heated atmosphere; and is therefore cooler, and the air feels fresher, and more invigorating. The medium temperature is said to be 2° lower, than on the island, the maximum heat being 87°, the minimum 79½°.

The dry season includes December, January, February, and March, and less rain falls on the coast, than on the island. The prevailing diseases do not differ materially from those of Penang, but fever is more frequent and severe, and the detachments of native troops, which have occasionally been sent to aid the police, have suffered from intermittent fevers, to a greater or less extent.

Census of the Population of Province Wellesley for the year 1838.

Year.	Malays.	Chinese.	Chuliahs.	Siamese.	Bengalese.	Fluctuating.	Total.
1838	44,350	2283	430	451	554	800	48,871
1839—Estimated present population	....	....	....	....	....	....	50,000
Estimated area of the Province—square miles........150							
Estimated number of square Acres in Cultivation with rice and other intertropical products, such as sugar, spices, indigo, &c. &c. } 24,000							

SINGAPORE.

General description. Singapore, an island in the straits of Malacca, at the south-east extremity of the Malayan peninsula, from whieh it is separated by a narrow strait, is situated in north latitude 1° 15″, and east longitude 104°. A british settlement was formed here in the year 1819, under the superintendenee of the late Sir Stamford Raffles, governor of Beneoolen.

The island is about sixty miles in eireumferenee, eontaining an area of 1,423,000 acres of land, its interior exhibiting a sueeession of hills and dales, eovered with dense forest ; but the only hill of any eonsiderable elevation, is *Bukit Tinra,* or the tin hill, near the northern eoast, which is isolated, barren and about 1200 feet in height.

The interior of the island is but little known to Europeans, but there is a small independent Chinese settlement a few miles distant from the town, from whenee supplies are brought to the bazaar.

Soil and geological features. The soil near the town is of a sandy nature, but in the interior, it is well adapted for the growth of the most valuable artieles of oriental produee. The sub soil, is ehiefly lateritious or a reddish clay, intermixed with beds of gray marl. The rocks are sandstone and eonglomerate, the sandstone appearing exposed on some head lands on the eoast, mueh broken and disloeated, by the aetion of some disturbing power.

Singapore being a penal settlement, the conviets sent here are employed in making roads into the interior, which when eompleted will lead to mueh improvement. The grounds near the town are laid out in gardens by the Chinese, a most industrious race, who grow abundanee of vegetables and fruit ; and have also many nutmeg plantations, situated upon the hills, from whieh the jungle has been eleared

Nutmeg Plantations.

away; towards the interior, some spots have likewise been cleared by them, on which they cultivate gambeer.

Creeks. There are several small creeks, or inlets of the sea, throughout the island, particularly on the east side, by which the rains, that fall so abundantly throughout the year, find a ready outlet to the sea. The creeks and swampy grounds are cleared out by the rise and fall of the tide, and are thereby kept free from decaying vegetable matter, which would otherwise be a productive source of miasmata.

Monsoons. Both monsoons, extend their influence to the straits, the north-east commencing about the 15th October, and continuing until the setting in of the south-west, about the middle of April;—rain is never very constant, but it usually comes on in heavy squalls, lasting from one, to five hours, the average quantity of rain during the year, is about 90 inches.

Climate. The climate of Singapore though sultry, is not unhealthy, and the vapours, or miasmata arising from the marshes and swamps, do not seem to exert an injurious influence on the health of the inhabitants.

The atmosphere is in general extremely moist, and the sky overcast; though when the sun shines out, it does so with great power, and its effects are enervating;—at night dense fogs spread over the island, and at particular seasons, the dews are heavy.

The thermometer seldom rises higher than 86°, or falls below 70°, nor does it vary more than 4° or 5°, in the 24 hours.—To the feelings, the air is agreeable, as, on account of its moisture, the unpleasant sensations caused by a high temperature are moderated, and the climate agrees well with the European constitution.

A meteorological table for the year 1830, is here given.

Months.	Medium temperature for the whole month.	Maximum.	Minimum.	Number of days on which rain fell.	Prevailing winds.
January..........	78° 31'	84°	74°	25	N. &. N. W.
February..........	79 46	86	76	16	N. E. &. S. E.
March..........	80 23	88	75	17	S. &. S. E.
April..........	81 23	88	76	13	S. W.
May..........	81 29	86	77	13	W. &. S. W.
June..........	81 58	87	75	17	W. &. S. W.
July..........	80 51	88	75	13	S. &: S. E.
August..........	80 20	86	75	23	S. E. &. S.
September..........	79 22	85	74	15	S. & S. W.
October..........	78 30	86	75	12	W. &. N. E.
November..........	76 43	85	75	21	S. &. S. W.
December..........	78 34	84	75	23	N. &. N. E.

Mean temperature for the year 79½°.

The average maximum and minimum of the thermometer, from July till the end of December 1843, is shown in the annexed table.

Months.	Maximum.	Minimum.
July..........	85°	80°
August..........	86	80
September..........	86	76
October..........	82	78
November..........	83	77
December..........	82	77

Prevailing diseases of the troops.

The prevailing diseases are rehumatism, and fevers principally of the quotidian type, and these complaints are most frequent amongst the native troops, and may generally be traced to exposure on duty at night. The health of the sepoys likewise becomes impaired, from using a less generous diet, than they were previously accustomed to, mutton and beef not being procurable. Ulcers of a grave

character, are common about the changes of the monsoons, when the weather is sultry, and the frame relaxed, a condition of the atmosphere, which produces a disposition in common sores, to take on an unhealthy, and often gangrenous action; and it is doubtless aided by the state of the constitution mentioned.

Town of Singapore. The town, which is rapidly extending, stands on the south side of the island, close to the shore, where the land is only a few feet above high water mark; the mercantile part runs along the western side of an inlet, of about 300 feet wide, which penetrates a short way inland; across the inlet a long narrow wooden bridge has been thrown, about three hundred yards from its mouth, forming a communication with the suburbs, and a good road runs to the military lines, distant about a mile and a half.

The streets are irregular, and many of the houses are built of brick, but those in the outskirts, occupied by Chinese, Klings and other native shopkeepers, are chiefly of wood and thatched. On the eastern side of the inlet, a good road runs along the shore to a village called "Campong glam," one mile and a half from Singapore, occupied by a population of about 4000 Chinese, Bugis, Malays, and Javanese. From this the road strikes a short distance into the country, and returns with a sweep to the town; on the side fronting the sea, are the houses of the principal Europeans, some of which are large and handsome buildings, and this, called the "Circular road," forms the usual evening drive.

Government house stands on the top of a hill at the back of the town, from whence there is a fine commanding prospect, a signal house is also situated on the same eminence; and at the foot of the hill are the remains of a botanical garden, planted by the founder of the settlement, in which are several flourishing nutmeg trees. In the centre of what is called *the Marina*, is the institution, a handsome building, founded by Sir Stamford Raffles, and supported by charitable contributions. for the education of the different

classes of native children. There are also two jails close to the town, a church, court house, and a police office.

Vegetable productions. The chief productions of the island are pepper, areca and cocoanuts. The market is well supplied with fruit, imported chiefly from Malacca, amongst which is the mangosteen, and the dorean, the latter a very favorite fruit amongst the Malays; in appearance it closely resembles the jack fruit, but smells strongly of assafœtida. Fungous plants of an extraordinary size, resembling immense vases, are found on the salt swamps, some of which are capable of containing half a barrel of water, and from their appearance are commonly called " Neptune's cups."

Markets. Singapore is well supplied with fish, turtle, rock oysters, poultry and ducks; and beef is occasionally to be had in the market. Sheep are brought from Bengal, and mutton is consequently very expensive, 10 Spanish dollars being the average price of a sheep.

Draft buffaloes are procured from Malacca, and ponies from Sumatra and Java.

Wild Animals. The chief wild animals are hogs, deer, and tigers which are numerous and ferocious, the inhabitants being frequently carried off by them; and aligators are also numerous, and of large size.

White Ants. The white ant is of large size, and particularly destructive.

Harbour. The harbour of Singapore is safe, easily approached, and well sheltered, being an entre-port between China and the eastern Islands, and the rest of the world; a direct trade is also carried on with many places.

Trade. The Malays and Chinese purchase large quantities of british manufactured goods, which they exchange for the produce of the different islands, to be re-exported to England, India and other parts of the world.

Population. Singapore in 1840, had a population of upwards of twenty thousand souls, composed of people belonging to all the neighbouring countries and islands, the majority however being Chinese; the Malays form but a small portion of the inhabitants, and reside in villages on the coast, or on the inlets. They subsist chiefly by fishing and piracy.

Local Government. The local government is administered by a Resident counsellor, who is permanently stationed at the settlement.

Military Forces. The military force usually consists of a wing of a native regiment of infantry, and half a company of native artillery.

Cantonment. The cantonment for the troops, is situated a mile and a half south south-east of the town, a range of small rounded hills, separating it from the sea. The huts of the men are mere sheds, and as the floors are not raised from the ground, benches, or sleeping places, have been provided for them, to prevent the injurious effects of damp floors.

The situation of the lines is faulty, in their being nearly on a dead level, rendering efficient drainage impracticable, though a piece of gently sloping ground adjacent. used as the parade. would have afforded an eligible site.

The place of arms, guard room, and hospital are in the immediate vicinity, and are substantial brick and chunam buildings. The hospital is tiled, and very spacious, measuring 115 feet by 45, it has four small verandah rooms, one of which is used as a dispensary, and is surrounded by a strong wooden fence, forming a court within of considerable extent; the sick are all supplied with cots.

Hospital

Officers houses. The officers bungalows, are erected on the summits, of some small hills around the lines; they are open and airy, commanding a view of the sea, from which they are distant, from a quarter to half a mile; the jungle reaches to within about 40 yards of the lines, on the northern side, but

in every other direction the ground is clear and open for a considerable distance.

Artillery lines. The artillery are stationed close to the western point or entrance of the inlet, near the town, where there is a saluting battery.

Naval force. The naval force usually consists of a sloop of war.

Sickness on the 4th Regiment M. N. I. in 1843. The 4th regiment madras native infantry having suffered considerably in 1843, from sloughing ulcers, and other diseases arising from an impaired state of the constitution, the following observations are extracted from the medical report of the corps for that year, as elucidatory of the nature of these complaints, and their causes.

Prevailing diseases. "Fevers of the ephemeral and quotidian types, rheumatic affections, and phagedenic ulcers, are the diseases most prevalent ; under the head of rheumatism however, are included several cases of burning of the feet, which is accompanied with a dry and glazed condition of the skin ; none of the cases of fever have presented any thing remarkable, some proved rather tedious, but yielded to the use of quinine, and other tonics."

Rheumatism. "Many cases of rheumatism have occurred, of a very troublesome description, especially when combined with the symptoms above noticed ; viz. burning sensation in the soles of the feet, and dry and glazed skin, this affection occurs either with or without true rheumatic pains, and no particular causes can be assigned, to account for it. The patient on presenting himself for admission into hospital, has an anxious expression of countenance, which is often puffy, with a yellowish tinge of the conjunctivæ, the bowels are disordered, and the appetite bad ; the skin is invariably harsh, dry and glazed, and eventually desquamates ; and no such cases derive any permanent benefit from medical treatment here, they have therefore, always been sent to Madras."

Ulcers.

"Phagedenic ulcers which have committed great ravages, commenced about the begining of the month of September 1843, and continued to increase up to the end of November, when the cases became less numerous and severe. In short, when the health of the men began to suffer from the circumstances hereafter noticed, the ulcers became numerous, and assumed a phagedenic character. The worst description of ulcer was generally situated about the lower third of the leg, or on the ankle and foot, and usually proceeded from some slight external injury, or from the pustules of itch; on admission the expression of countenance was anxious, the tongue white and flabby, bowels irregular usually relaxed, skin cold, and clammy, pulse quick and weak, and the lower limbs frequently somewhat œdematous. The patients complained of burning or stinging pain in the sore, which was usually of a round form, and excavated; if the strength could bear it, purgatives, usually calomel and jalap, were administered on admission, soothing remedies being applied to the sores. After the intestinal canal had been cleared of its unhealthy secretions, camphor mixture, and liquor ammoniæ acetatis, with tincture of opium, and iodide of potassium (from 8, to 12 grains daily) were given. On the separation of the sloughs the strength was supported by as nourishing a diet as could be procured, with wine, beer and other tonics"

"The local remedies found most useful in promoting the separation of the sloughs, were wheat or rice flour poultices, the surface being sprinkled with pulvis cinchona, or charcoal powder; and also the fermenting and pumpkin poultices, which appeared to answer well in many cases. The sore was occasionally washed with a solution of nitric acid, in the proportion of 1 part to 8 of water, and after the separation of sloughs, a weak solution of nitric acid in water, or a solution of some of the metallic salts, was found useful in promoting cicatrization. When the surface of the sore, was not very extensive; many patients did well under this mode of treatment. A considerable number of sores however, fell

into an indolent condition, and the usual remedies lost their effect, in such cases the application of creosote was attended with much advantage, producing healthy granulations in a short time, and though it had not the effect of stopping the sloughing process, or preventing its extension, it was certainly useful as an application to indolent ulcers. It may either be applied on the surface of a poultice, or made into an ointment, with burgundy pitch, and used as a dressing for the sore."

"Several cases advanced to a fatal termination, the patients either sinking from the effects of constitutional irritation, or being reduced to a state of excessive debility, were carried off by colliquative diarrhœa, after the sloughs had separated. In two cases amputation was performed, the first patient did well, and has since proceeded to Madras; the second died on the fourth day after the operation, and the ill success of this, made such an unfavourable impression on the minds of the men, that they would not submit to be operated upon, afterwards."

"A few slight cases of diarrhœa and dysentery have occurred, but they presented nothing worthy of remark; very few men in the regiment are free from itch, which may be attributed to want of cleanliness, as well as to a diet consisting too much of fish."

Dracunculus. "Previous to the departure of the regiment from Madras, in April 1843, a few cases of dracunculus occurred, when stationed at Vepery, and continued to appear in the various detachments on board ship, and after arrival at Singapore, up to the month of August. In whatever manner this parasite makes its way into the human body, there can be no doubt of its having existed in some condition or other, in several of these cases, for a period of at least four months, previous to making its appearance externally; dracunculus being unknown amongst the inhabitants of Singapore"

Causes of sickness in the regiment. "That the great increase of sickness amongst natives of India, does not arise solely from the

influence of a climate, the essential characteristics of which are, its moisture, and steadiness of temperature, is evident, from no endemic diseases prevailing at the settlement."

"The food of the sepoys consists of vegetables and fish, and the consequences of this meager and deficient diet, is apparent in the emaciated appearance of the greater part of the men, accompanied in many with pains in the limbs, and puffy and unhealthy countenances, betraying a want of tone in the system, and a serous eondition of the blood."

"It has accordingly been found, that trifling injuries produce sloughing ulcers, and exposure to eold or wet, fever or diarrhæa; and although many continue to perform their routine of duty without complaint, any unusual exertion or exposure, would certainly cause them to become inmates of the hospital."

"At Singapore though fish and good vegetables are proeurable, animal food is not by the sepoy, and such diet, which would in any climate be defective, if used for a continuance, is still more hurtful in a relaxing one like this."

"The Malays and Chinese are a strong and healthy race, but they use animal food of various kinds, sueh as the natives of India will not toueh."

"From what has been stated, it will therefore be obvious, that a supply of animal food is requisite for the men, in order to keep a regiment in an effective condition, and as the sepoys means render it unattainable, it should be supplied to them, or plaeed within their reach; mutton and fowls might be readily furnished, the expense, would not be great, and the saving to the state, would in many ways counterbalance the outlay."

"The separation of the men from their families, exerts also a most prejudicial influence on their health. They leave large "family certificates" for their support, and become dispirited and apathetic, and with a view of saving for their

return home, many do not even spend the balance of the pay they receive."

"Out of 189 cases of ulcer, since the arrival of the regiment at Singapore, 133 occurred in young sepoys, of from one to four years service, their average ages being about 21 years; and with respect to other diseases, the old and young, have as might be expected, suffered more than the middle aged."

No. 17.—*Table exhibiting the sickness and mortality amongst the native troops at Singapore, from* 1835 *to* 1841, *inclusive.*

Aggregate strength. 2524. CLASSES.	DISEASES.	Admissions.	Died.	Total admissions from each class.	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	278	1	1303	16	51 ·624	1 ·227
	,, intermit quot.	742	12				
	, tertiana......	111	1				
	,, remittens....	2	0				
	,, com: cont....	170	2				
	Cholera.........	0	0	0	0	0	0
Diseases of the abdominal viscera......	Diarrhœa......	196	9	313	9	12 ·400	2 ·875
	Dysenteria.....	18	0				
	Colica.........	70	0				
	Obstipatio......	9	0				
	Hæmorrhois...	2	0				
	Dyspepsia......	18	0				
	Hepatitis.......	5	1	5	1	0 ·198	20 ·000
Diseases of the lungs.	Catarrhus......	17	2	33	5	1 ·306	15 ·151
	Asthma.........	12	1				
	Phthisis pulmonalis.........	2	1				
	Pneumonia	2	1				
Diseases of the brain.	Apoplexia......	1	1	29	3	1 ·148	10 ·344
	Epilepsia.......	1	0				
	Paralysis.......	17	2				
	Amentia........	6	0				
	Ebrietas........	3	0				
	Delirium Tremens.........	1	0				
Eruptive fevers......	Variola.........	1	0	2	0	0 ·079	0 ·000
	Varicella.......	1	0				
Dropsies....	Anasarca......	16	4	18	6	0 ·713	33 ·333
	Ascites........	2	2				
	Rheumatismus.	343	10	343	10	13 ·589	2 ·915
Venereal affections..	Syphilis prim..	20	0	32	0	1 ·267	0 ·000
	Gonorrhœa.....	6	0				
	Hernia humoralis............	6	0				
Specific diseases.....	Lepra..........	2	0	42	3	1 ·664	7 ·142
	Dracunculus...	4	0				
	Atrophia.......	32	3				
	Scrophula......	4	0				
Diseases of the eye...	Morbi oculorum	34	0	34	0	1 ·347	0 ·000
Do. skin..	,, cutis......	270	1	270	1	10 ·697	0 ·370
	Other diseases..	593	3	593*	3	23 ·497	0 .505
	Total....	3017	57	3017	57	119 ·532	1 ·889

* Of this number 138 were Phlogosis, 305 ulcus.

NOTE.—Per centage of deaths to strength, 2·258.

MALACCA.

A comprehensive topographical account of Malacca, the most ancient and best known settlement on the Malayan peninsula, having been published by Dr. Ward, of the Madras Medical Establishment, in the year 1830, it is not considered requisite to enter into a particular description of a place, the history of which is already so fully given in the report alluded to ; and which has been printed and extensively circulated, throughout India, by order of the government of Penang.

Situation. Malacca is situated in N. Latitude 2° 14, and E. Longitude 102° 12, being distant about 300 miles from Penang, and 150 from Singapore ; the settlement was originally in the hands of the Portuguese, from whom it was wrested by the Dutch, and in the year 1795, it fell into the possession of the English, by whom it has ever since been retained. The country, in the interior, is a continued dense forest, through which there are not even foot paths to be found, and the boundaries of the district have not been laid down, little in fact being known of the interior, or of any other parts than the coast, and the borders of the Malacca river.

Town. The town of Malacca runs in a parallel line with the sea coast, the houses of the better class of inhabitants, are situated either quite close to, or upon the beach ; and the northern part is occupied by Malays, Klings and Chinese. The town itself is built on a flat sandy soil, and the gardens around and on the sea side, yield little beyond cocoanuts.

In the interior, a few small hills are to be seen, the base of which is laterite ; when fresh dug, it is soft, but on exposure to the air becomes quite hard, and the number of very old buildings to be seen, testify its great durability.

The town is bounded on the south by the sea, and on the E. and N. by the Malacca river ; the old fort situated to the

eastward of the town, was formerly a place of strength, but was razed in 1807, and the ditch filled up, the only part left standing, being some bastions, now in a ruined conditon.

Malacca river. The small stream called the Malacca river, runs in a winding direction into the interior, for about twenty miles, and is navigable during the rainy season for small boats, for about fifteen miles. There is an extensive tract of rice land, under cultivation along its banks, which produces luxuriant crops, and the river is also of great service,in draining the country. The water is brackish for some miles up, and its banks are low, and in part covered with jungle; it has always a muddy appearance throughout its whole course. The inhabitants along the banks are few in number, and are employed in husbandry, and in felling timber for the Malacca market.

Produce. Rice and cocoanuts, are the chief vegetable productions of the place. The inhabitants are composed principally of malays, portuguese, and chinese; the two former are a lazy indolent class of people, who when they have earned a little money, live in idleness till it is spent; and when they have again collected sufficient to keep them in food for a few weeks, will work no longer; the chinese on the contrary are a hard working class, but are much addicted to opium smoking.

Climate. From the end of November till the end of February, the prevailing winds are northerly; it usually rains during the whole of December, but fair weather succeeds in January and February, when the rice crops are cut down. In April the S. W. monsoon commences, and is succeeded by the N. E. monsoon, in November. During August and September, heavy gales from the Sumatra coast bearing S. S. W. are of frequent occurrence.

Land winds blow at night throughout the entire year, and the thermometer generally ranges from 76°, to 84°.

Abstract of the weather at Malacca, for the year 1828.

Months.	Medium temperature of the month. At 6 A.M.	At 3 P.M.	At 9 P.M.	Medium temperature of the whole month.	Maximum.	Minimum.	Monthly range.	Number of days on which rain fell.	Total quantity of rain during the month. in.	c, p.	Greatest daily quantity. in.	c, p.	Prevailing winds.
January,	75°	82°	78°	78⅔	86°	73°	13°	27	10				N. E. & S. W.
February,	77	85	79	80⅔	87	74½	12¼	12	7	92	1	85	N. E. & S. W.
March,	77	84¼	79	80	87	74	13	19	9	8	2	75	N. E. & S.
April,	79	86¼	82	82⅓	88	76⅓	11⅓	11	4	33	1	40	W. S.
May,	79	86⅓	82	82½	88¼	76	12⅓	13	6	85	1	70	S. E.
June,	76½	86½	81	81	89	74	15	7	4		1	30	S. E. & W.
July,	77	84	81	80⅔	87	74	13	12					W. & S. W.
August,	78	82	80	80	84	74	10	17	8	70	1	75	S. E.
September,	76⅓	82	78⅔	79	84	75	9	15	12	50	2	75	S. S. W.
October,	78	86	81	81⅔	86	75	11	14	9		2	25	N. W.
November,	77	82	79	79⅓	85	74	11	21	7	75	1	75	N. W.
December,	75½	82½	78¼	79	85	72	13	20	9	25	1	35	N.

Endemic diseases.

Of the endemic diseases most prevalent here, fever may be reckoned the principal; amongst the lower class of chinese, scrophulous ulcers are very common. The troops of late years have been healthy, and have not suffered from any particular sickness, slight fevers being the principal disease.

The most unhealthy time of the year is during the Sumatra gales, when the atmosphere is very moist.

No register of deaths or births is kept, either among the chinese, malays or portuguese.

During the months of June, July and August, a great many deaths have been observed to take place amongst dogs and poultry, but no other animals appear to suffer.

Hospital. The hospital for the troops at this place, has an upper and lower ward, with back verandahs to each, and a cook house for the men, in two divisions, each division containing ten fire places. The hospital faces N. and by E., looking towards the parade ground, an open space covered with green sward.

Barracks and lines for the troops. The barracks and lines for the troops, are situated about one hundred and fifty yards from the hospital. The barracks consist of only one room, in which the arms and accoutrements are kept, it is built of brick and chunam, with a tiled roof.

The sepoys huts are built of bark, in the native manner, and covered with atap; they run in six lines, of 156 feet in length and 30 feet breadth, having 12 divisions on each side, in each of which 4 men reside. The breadth of each division is 15 feet, and its length 12; in the lines are 3 wells of good water.

The native officers are provided with bungalows, one of which contains four rooms, another two, the former is occupied by four, and the latter by two officers; both are built of brick, with tiled roofs.

The privies are situated about 150 yards from the lines, on the edge of the river, there are 15 small rooms with a door to each, for the men, and a small one at a little distance, with one door, for the native officers, the whole are washed by the stream.

The detachment at Malacca, consists of from 350 to 400 men, of the native corps at Singapore, (which has of late been

made the head quarters station in the Straits,) and 40 golundauze or native artillery.

For several years past the troops have been very healthy, the chief complaints being intermittent fever of a mild character, and rheumatic affections. Cases of the phagedenic ulcer described by Dr. Ward, which prevailed so extensively in the 25th regiment Madras native infantry in 1827 and 28, are not now seen, though as at all the stations on this coast, ulcers are frequent and troublesome, all abrasions of the skin, being apt to run into ulceration, from the causes previously mentioned; viz. a cachectic state of the system induced by poor living, the peculiar moist nature of the climate, appearing also to be conducive to this disease.

Hot springs. Several hot springs are found in the interior, distant about 18 miles, one of which is at Sabang, near fort Lismore, and another in the Naming district. The springs at both these places, are situated in swampy flats, the water is of a bluish or greenish tinge, and from the bottom of the wells air bubbles rise, emitting a strong smell of sulphuretted hydrogen gas; they have not yet been analyzed. On introducing a thermometer into one of them, the mercury rose, in the space of one minute, to 130°.

These springs are very much resorted to by all classes of natives, for the cure of sprains, rheumatism, and a variety of local diseases, and baths have been built by subscription, at Ayer Punnas near Sabang, also a bungalow for Europeans, and a small barrack for the use of the sepoys; and there can be no doubt but many chronic cases of disease, would be much benefitted by a change from the coast, to the vicinity of the wells, and the use of the hot baths.

No. 18.—*Table exhibiting the sickness and mortality amongst the native troops stationed at Malacca, from* 1830 *to* 1841, *inclusive.*

Aggregate strength 4612. CLASSES.	DISEASES.	Admitted.	Died.	Total admissions from each class	Total deaths from each class.	Per centage of sick to strength.	Per centage of deaths to sick.
Fevers......	Febris ephemera	237	2	1316	35	28 ·534	2 ·659
	,, intermit quot.	854	20				
	,, tertiana......	28	0				
	,, remittens	102	6				
	,, com. cont....	95	7				
	Cholera........	0	0	0	0	0	0
Diseases of the abdominal viscera......	Diarrhœa	100	11	198	18	4 ·293	9 .090
	Dysenteria......	29	4				
	Colica..........	15	0				
	Obstipatio......	34	0				
	Hæmorrhois....	2	0				
	Dyspepsia......	18	3				
	Hepatitis.......	0	0				
Diseases of the Lungs	Catarrhus......	41	3	53	7	1 ·149	15 ·094
	Hæmoptysis....	1	1				
	Asthma........	2	0				
	Phthisis pulmonalis.........	2	2				
	Pneumonia.....	6	1				
	Dyspnœa......	1	0				
Diseases of the Brain.	Apoplexia......	2	1	40	4	0 ·867	10 ·000
	Epilepsia.......	2	0				
	Paralysis.......	13	2				
	Amentia........	4	0				
	Mania..........	15	0				
	Tetanus........	1	1				
	Delirium trem.	3	0				
Eruptive fevers......	Variola.........	1	0	10	0	0 ·216	0 ·000
	Varicella.......	5	0				
	Erysipelas......	4	0				
Dropsies....	Anasarca......	65	22	74	26	1 ·604	35 ·135
	Ascites.........	9	4				
	Rheumatismus.	290	4	290	4	6 ·287	1 ·379
Venereal affections...	Syphilis prim..	26	1	63	2	1 ·366	3 ·174
	,. consecutiva..	14	1				
	Gonorrhœa.....	8	0				
	Hernia humoralis...........	13	0				
	Strictura urethræ.........	2	0				
Specific diseases......	Lepra..........	2	0	92	18	1 ·994	19 ·565
	Beriberi........	7	1				
	Burning of the feet..........	11	0				
	Dracunculus....	2	0				
	Atrophia.......	57	17				
	Scorbutus......	5	0				
	Scrophula......	8	0				
Disease of the eye...	Morbi oculorum	59	0	59	0	1 ·279	0 ·000
Do. skin.	,, cutis......	398	1	398	1	8 ·629	0 ·251
	Other diseases..	867	2	867*	2	18 ·798	0 ·230
	Total....	3460	117	3460	117	75 ·021	3 ·381

* Of this number 154 were Phlogosis, Ulcus 482 with 2 deaths.

NOTE.—Per centage of deaths to strength, 2·536.

Concluding remarks.

The following series of tables from No. 1. to No. 10, comprehend the whole sickness and mortality amongst both European and Native armies, which have occurred during the period of ten years embraced in the preceding reports; and they also shew in a clear manner the diseases which have been most prevalent and most destructive amongst both bodies of men.

In the tables No. 3 and 4, the number invalided, pensioned or discharged are also given; and those not included under the diseases specified in these tables are given in the notes appended to each table.

The loss to the service annually by deaths from diseases is 4·568 per cent, amongst the Europeans, and including those invalided, the ratio is increased to 6·882.

Amongst the native troops No. 4, the per centage of deaths to strength averages annually 1·604, but including those removed from the effective service by pension, invaliding &c. the per centage is augmented to 3·638.

In this table it will be observed, that the number invalided under the heads *leprosy, and ulcer phagedenic* exceed considerably the admissions; it appears that most of those under the former head would have been more properly placed under the head *general debility*, and the majority of the latter under the head *syphilis consecutiva.*

In conclusion the following statements are given to exhibit the relative healthiness of each of the several divisions of the army, as regards the ratio of sickness to strength, of deaths to sick treated, and of deaths to strength.

European Troops.

No.	Divisions.	Per centage of sick to strength.	Divisions.	Per centage of deaths to sick.	Divisions.	Per centage of deaths to strength.
1	Moulmein..........	143 ·488	Ceded districts....	1 ·584	Mysore............	2 ·893
2	Malabar......... ..	153 ·122	Nagpore..	1 .632	Ceded districts....	3 ·159
3	Centre.............	155 ·773	Mysore............	1 ·718	Moulmein.........	3 ·739
4	Mysore............	163 ·085	Presidency.........	2 ·302	Malabar...........	3 ·769
5	Southern..........	169 ·737	Southern..........	2 ·317	Southern..........	3 ·934
6	Northern..........	184 ·243	Malabar..........	2 ·461	Nagpore..........	3 ·937
7	Presidency........	186 ·374	Moulmein.........	2 ·606	Presidency........	4 ·291
8	Ceded districts....	199 467	Hyderabad........	2 ·895	Centre.............	5 ·870
9	Hyderabad........	217 ·230	Centre.....	3 ·768	Hyderabad.......	6 ·259
10	Nagpore......	241 ·194	Northern..........	5 ·509	Northern..........	10 ·151

Native Troops.

No.	Divisions.	Per centage of sick to strength.	Divisions.	Per centage of deaths to sick.	Divisions.	Per centage of deaths to strength.
1	Presidency........	43 ·137	Nagpore..........	2 ·012	Presidency........	1 ·099
2	Centre	49 ·353	Moulmein.........	2 ·056	Nagpore..........	1 ·255
3	Ceded districts....	49 ·456	Mysore............	2 ·109	Malabar...........	1 ·275
4	Malabar...........	57 ·036	Malabar...........	2 ·236	Moulmein.........	1 ·386
5	Hyderabad........	57 ·351	Presidency........	2 ·547	Mysore............	1 ·415
6	Southern..	60 ·099	Hyderabad........	2 ·596	Hyderabad........	1 ·489
7	Nagpore......	62 ·387	Southern....... ...	2 ·890	Centre.....	1 ·539
8	Mysore.......	67 ·093	Northern..........	2 ·939	Ceded districts.....	1 ·613
9	Moulmein.........	67 ·416	Centre............	3 ·120	Southern.....	1 ·737
10	Northern..........	88 ·245	Ceded districts....	3 ·263	Northern..........	2 ·593

THE END.

GENERAL TABLES.

EUROPEAN TROOPS.

No. 1.—*Table exhibiting the half yearly admissions and deaths from the principal diseases, throughout the entire Army of Madras, during the period of ten years from* 1829 *to* 1838 *inclusive ; the aggregate strength each year is also given, with the per centage of sick to strength, of deaths to sick treated, and of deaths to strength.*

Years.			Admissions & deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Aggregate strength each year.	Annual per centage of sick to strength.	Annual per centage of death to sick treated.	Annual per centage of deaths to strength.
1829	Admitted..	1st half..	10205	6	0	0	185	0	10	485	986	0	0	670	547	500	0	752	22	0	559	610	0	647	337	0	887	3002	11,640	169·759	2·115	3·591
		2d ,,	9555	13	0	9	54	0	3	311	1020	0	0	759	696	275	0	573	12	10	748	511	0	702	266	0	823	2780				
	Died......	1st half..	211	2	0	0	29	0	2	3	72	0	0	6	5	12	0	26	3	0	0	4	0	2	14	0	2	29				
		2d ,,	207	7	0	3	6	0	1	3	69	0	0	10	8	9	0	33	3	0	0	5	0	5	15	0	4	26				
1830	Admitted..	1st half..	8394	11	0	2	202	0	0	266	874	0	0	590	477	250	0	613	18	0	522	487	0	607	227	0	745	2503	11,623	156·001	2·062	3·217
		2d ,,	9738	10	3	8	88	0	1	367	1122	0	64	963	532	402	0	607	9	0	586	483	0	615	238	0	843	2797				
	Died......	1st half..	177	3	1	1	41	0	0	2	34	0	0	6	5	6	0	28	1	0	0	5	0	0	11	0	1	32				
		2d ,,	197	3	2	0	4	0	1	10	82	0	0	4	7	7	0	32	0	0	0	3	0	0	13	0	4	25				
1831	Admitted..	1st half..	8420	15	0	7	95	0	0	277	795	0	113	658	320	424	0	677	10	0	261	414	0	626	243	0	828	2662	10,863	166·408	2·649	4·409
		2d ,,	9657	10	0	5	194	0	2	624	1059	0	77	777	495	472	0	652	10	0	495	448	0	663	241	0	757	2676				
	Died......	1st half..	191	6	0	1	20	0	0	6	46	0	0	9	2	6	0	29	0	0	0	3	0	2	13	0	3	45				
		2d ,,	288	4	0	2	71	0	1	9	80	0	0	7	4	10	0	32	0	0	0	7	0	3	17	0	1	40				
1832	Admitted..	1st half..	7984	4	0	13	208	0	11	241	660	0	81	729	297	280	0	565	16	0	286	388	0	689	228	0	831	2457	10,580	164·272	3·371	5·538
		2d ,,	9396	9	2	6	320	0	7	550	866	0	127	1054	372	200	0	524	30	0	463	392	0	801	391	13	811	2458				
	Died......	1st half..	230	3	0	3	57	0	2	8	50	0	0	6	4	3	0	39	1	0	0	4	0	1	14	0	4	·31				
		2d ,,	356	6	1	3	166	0	0	14	46	0	0	17	6	1	0	35	0	0	0	3	0	2	17	2	0	37				
1833	Admitted..	1st half..	10319	24	34	0	849	0	0	557	875	0	116	1120	242	194	0	512	19	0	333	442	0	1132	426	0	785	2659	9,853	207·114	3·395	7·033
		2d ,,	10088	12	4	2	117	0	2	407	1204	0	149	801	673	295	0	511	13	0	361	364	0	1520	243	0	681	2729				
	Died......	1st half..	386	19	11	1	191	0	0	10	55	0	0	9	4	4	0	21	1	0	1	4	0	2	13	0	2	38				
		2d ,,	307	7	2	0	42	0	1	15	101	0	4	11	7	15	0	30	2	0	0	1	0	3	17	0	5	44				
1834	Admitted..	1st half..	9063	12	7	2	78	38	248	500	715	0	121	1032	587	128	23	596	13	0	260	379	0	1603	310	0	728	1683	9,321	237·002	2·648	6·276
		2d ,,	13028	14	6	5	52	83	459	533	1336	0	295	1098	2991	393	5	544	17	1	306	478	0	1414	400	0	718	1880				
	Died......	1st half..	192	7	3	0	7	0	7	6	53	0	2	13	6	6	0	24	2	0	0	4	0	3	19	0	5	25				
		2d ,,	393	12	3	1	7	0	4	24	135	0	1	15	34	36	0	42	0	0	0	9	0	5	18	0	3	44				
1835	Admitted..	1st half..	8836	5	12	0	25	103	366	265	567	0	153	638	1348	70	6	480	14	0	216	490	1	1248	358	1	762	1708	9,484	193·483	1·722	3·331
		2d ,,	9514	6	3	1	35	87	520	321	653	0	205	616	958	72	5	504	2	0	283	647	0	1447	396	2	710	2041				
	Died......	1st half..	146	4	0	0	1	0	4	9	46	0	0	13	5	5	0	17	1	0	0	2	0	0	15	0	2	22				
		2d ,,	170	1	2	1	1	0	3	5	57	0	1	10	6	6	0	18	0	0	1	5	0	6	16	0	3	28				
1836	Admitted..	1st half..	8262	14	8	0	16	90	417	293	506	0	121	518	401	72	1	528	12	0	180	638	2	1278	371	1	724	2071	10,201	174·355	1·956	3·411
		2d ,,	9524	2	3	0	20	80	368	354	963	0	128	784	766	78	2	552	15	0	381	714	1	1394	383	1	660	1875				
	Died......	1st half..	136	7	1	0	0	0	11	5	37	0	0	2	5	5	0	19	0	0	0	4	0	2	15	0	2	21				
		2d ,,	212	1	1	0	3	0	1	5	89	0	0	10	8	5	0	24	2	0	1	7	0	4	18	0	6	27				
1837	Admitted..	1st half..	8059	17	6	0	32	66	297	279	738	0	93	786	368	64	5	550	15	0	179	677	4	1256	304	1	592	1730	10,068	174·116	3·114	5·423
		2d ,,	9471	9	4	0	141	108	254	462	1078	0	117	1113	505	68	4	543	17	0	254	696	0	1183	414	3	582	1916				
	Died......	1st half..	244	12	2	0	15	0	9	4	94	0	0	10	5	4	0	32	1	0	1	7	1	4	18	0	4	21				
		2d ,,	302	5	1	0	57	1	3	11	115	0	0	15	6	4	0	27	1	0	2	8	0	7	16	0	0	23				
1838	Admitted..	1st half..	9357	9	5	1	67	102	167	467	670	0	124	1379	299	50	1	525	4	0	153	761	1	1363	599	2	625	1983	9,798	177·097	2·189	3·878
		2d ,,	7995	3	9	0	55	89	131	510	755	0	111	744	390	49	3	443	6	0	223	668	3	1262	321	1	543	1676				
	Died......	1st half..	206	6	0	0	35	0	4	4	57	0	0	17	3	7	0	18	0	0	0	5	0	3	21	0	1	25				
		2d ,,	174	3	0	0	17	0	0	6	64	0	0	13	4	2	0	19	0	0	0	3	1	9	16	0	1	16				

GENERAL TABLES.

NATIVE TROOPS.

No. 2.—*Table exhibiting the half yearly admissions and deaths from the principal diseases, throughout the entire Army of Madras, during the period of ten years, from 1829 to 1838 inclusive; the aggregate strength each year is also given, with the per centage of sick to strength, of deaths to sick treated, and of deaths to strength.*

Years.			Admissions & deaths.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds and Injuries.	Other Complaints.	Aggregate strength each year.	Annual per centage of sick to strength.	Annual per centage of death to sick treated.	Annual per centage of deaths to strength.
1829	Admitted..	1st half..	14,926	12	11	0	378	42	0	413	229	0	0	164	3680	378	0	23	17	0	208	1710	8	866	106	0	1249	5432	63,697	45·068	2·602	1·172
		2d ,,	13,781	8	11	50	63	0	0	311	198	0	0	233	3078	206	0	20	31	0	392	1663	4	668	117	0	1188	5502				
	Died......	1st half..	439	7	2	0	170	1	0	18	16	0	0	6	45	24	0	2	0	0	0	20	5	7	23	0	6	87				
		2d ,,	308	6	5	8	31	0	0	21	14	0	0	4	54	13	0	3	1	0	1	20	3	7	19	0	6	89				
1830	Admitted..	1st half..	13,786	2	3	14	239	0	0	343	128	0	0	138	2708	189	22	21	16	0	276	1400	20	584	115	2	1289	6247	63,532	43·222	2·388	1·032
		2d ,,	13,674	11	0	41	20	0	0	278	122	0	452	186	2774	217	0	24	37	0	324	1450	3	521	132	1	1362	5721				
	Died......	1st half..	390	2	3	5	120	0	0	19	11	0	0	5	44	12	1	4	2	0	0	26	6	3	29	2	8	88				
		2d ,,	266	9	1	7	5	0	0	22	12	0	2	8	35	7	0	4	1	0	0	23	3	5	28	1	5	88				
1831	Admitted..	1st half..	13,402	6	5	17	395	0	0	423	146	0	679	170	1878	166	0	23	45	0	209	1281	5	652	82	0	1296	5924	58,340	46·984	2·838	1·333
		2d ,,	14,009	6	2	95	246	0	0	463	223	0	1080	114	2666	387	0	31	30	0	390	1307	2	490	138	0	1132	5107				
	Died......	1st half..	376	4	6	4	147	0	0	18	11	0	5	11	24	9	0	1	3	0	0	19	2	5	18	0	8	81				
		2d ,,	402	6	1	16	124	0	0	23	16	0	3	6	40	14	0	4	2	0	1	22	1	4	23	0	5	91				
1832	Admitted..	1st half..	12,815	9	4	66	407	0	0	275	176	0	1130	113	1700	318	0	27	33	0	177	1130	0	404	89	0	1305	5452	57,109	49·226	3·073	1·512
		2d ,,	15,298	7	12	185	397	0	0	404	264	0	2030	195	2696	389	0	24	32	1	360	1171	0	393	627	1	1229	4883				
	Died......	1st half..	330	7	3	10	155	0	0	5	15	0	6	9	20	8	0	1	2	0	1	26	0	1	21	0	8	82				
		2d ,,	484	5	3	20	177	0	0	17	21	0	4	12	37	15	0	4	0	1	1	24	0	3	23	1	8	105				
1833	Admitted..	1st half..	16,013	8	4	68	929	0	0	417	201	0	2262	151	2380	285	0	32	35	0	312	1173	9	572	366	0	1229	5580	57,423	58·774	3·780	2·222
		2d ,,	17,737	8	12	125	307	26	0	495	367	0	2719	236	4326	582	0	25	27	0	471	1195	1	763	111	0	1136	4805				
	Died......	1st half..	761	6	3	11	429	0	0	28	24	0	19	8	49	20	0	4	2	0	1	23	3	1	25	0	3	105				
		2d ,,	512	5	4	12	151	1	0	21	39	0	5	7	64	12	0	4	3	0	0	28	2	10	34	0	7	103				
1834	Admitted..	1st half..	17,513	4	102	80	86	887	5	677	319	0	1902	397	5209	464	32	30	25	0	184	1322	76	827	273	14	1312	3286	51,686	83·469	2·167	1·809
		2d ,,	25,629	10	93	156	27	1087	8	375	400	5	2789	289	12,552	469	37	20	39	0	311	1404	26	630	334	9	1174	3385				
	Died......	1st half..	409	4	9	4	48	0	0	29	42	0	10	16	81	28	0	6	3	0	1	21	4	6	33	0	11	53				
		2d ,,	526	7	20	23	9	2	0	37	57	0	15	22	145	26	0	[illegible]	1	0	1	21	0	6	42	1	6	85				
1835	Admitted..	1st half..	19,902	5	65	57	4	1262	6	320	251	2	2031	362	7239	334	110	18	57	5	456	1536	37	563	224	1	1309	3648	55,261	73·541	1·710	1·257
		2d ,,	20,738	6	63	147	8	1592	6	386	306	2	2035	374	6950	288	40	30	43	4	420	1679	11	519	331	3	1334	4161				
	Died......	1st half..	346	2	9	5	1	0	0	17	31	0	16	15	93	18	0	3	3	0	1	19	0	2	40	0	5	66				
		2d ,,	319	5	17	17	1	1	1	20	40	1	9	21	91	19	0	4	1	0	1	22	0	9	19	0	4	46				
1836	Admitted..	1st half..	27,693	19	80	93	7	1841	18	526	576	0	1443	439	12,430	1627	110	31	45	1	283	1760	23	538	311	4	1458	4035	52,746	87·018	2·150	1·871
		2d ,,	18,201	1	83	101	18	1307	11	366	312	0	1415	265	5588	509	45	29	23	3	808	1515	6	443	280	9	1236	3828				
	Died......	1st half..	651	11	11	7	2	2	2	46	98	0	6	29	254	34	0	[illegible]	1	0	0	28	1	4	43	0	12	62				
		2d ,,	320	0	10	28	9	0	1	22	19	0	6	15	81	10	0	1	2	0	1	20	0	3	29	1	6	65				
1837	Admitted..	1st half..	18,824	8	115	86	292	1413	16	628	335	0	1274	312	5092	434	206	24	30	2	315	1617	46	530	251	2	1553	4243	54,908	65·855	2·848	1·875
		2d ,,	17,336	6	95	138	414	1177	10	582	345	0	1629	231	4175	305	72	26	48	0	530	1588	15	546	347	2	1294	3761				
	Died......	1st half..	483	3	12	20	139	1	0	17	28	0	9	20	75	39	0	3	3	0	1	22	0	1	31	0	10	49				
		2d ,,	517	3	18	22	212	2	3	22	31	0	10	13	43	20	0	6	4	0	0	15	2	4	42	1	8	66				
1838	Admitted..	1st half..	18,003	6	66	52	518	1242	13	643	295	1	2192	216	3736	271	287	15	40	1	403	1634	98	605	279	1	1437	3802	53,701	67·121	3·198	2·147
		2d ,,	18,042	6	100	133	586	1115	8	655	313	2	2382	167	4497	228	51	18	32	0	392	1629	25	543	385	3	1323	3149				
	Died......	1st half.	558	5	20	13	227	0	0	23	24	0	4	9	52	20	1	1	3	0	1	20	6	8	38	0	5	78				
		2d ,,	595	6	23	20	253	0	1	28	35	0	6	10	54	13	0	2	2	0	3	24	4	2	33	0	7	70				

Table No. 3.—Abstract of the preceding Return shewing the Total number of Admissions and Deaths, also the number invalided, &c. amongst the European Troops of the Madras Army, from 1829 to 1838 inclusive.

DISEASES.

	Admissions and Deaths &c.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium Tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever Ephemeral	,, Continued.	,, Intermittent.	,, Remittent.	Guinea Worm.	Hepatic diseases.	Insanity.	Leprosy.	Ophthalmy.	Rheumatism.	Small Pox.	Syphilis, &c.	Thoracic diseases.	Ulcer phagedenic.	Wounds & Injuries	Other Complaints.
Aggregate Strength 1,03,431.																										
Admitted 1st half.	88,899	117	72	25	1,757	399	1,516	3,630	7,386	0	922	8,120	4,886	2,032	36	5,798	143	0	2,949	5,286	8	10,449	3,403	5	7,502	22,458
Admitted 2d half.	97,966	88	34	36	1,076	447	1,747	4,439	10,056	0	1,273	8,709	8,378	2,304	19	5,453	131	1	4,100	5,401	4	11,001	3,293	20	7,128	22,828
Total..	1,86,865	205	106	61	2,833	846	3,263	8,069	17,442	0	2,195	16,829	13,264	4,336	55	11,251	274	1	7,049	10,687	12	21,450	6,696	25	14,630	45.286
Died..... 1st half.	2,119	69	18	6	396	0	39	57	544	0	2	91	44	58	0	253	10	0	2	42	1	19	153	0	26	289
Died..... 2d half.	2,606	49	12	10	374	1	15	102	838	0	6	112	90	95	0	292	8	0	4	51	1	44	163	2	27	310
Total..	4,725	118	30	16	770	1	54	159	1,382	0	8	203	134	153	0	545	18	0	6	93	2	63	316	2	53	599
Invalided..	2,394	0	13	0	0	6	1	13	89	0	Fevers of all types.		67		0	309	47	0	73	408	0	76	201	17	192	882
Total died & invalided	7,119	118	43	16	770	7	55	172	1,471	0	Do.		565		0	854	65	0	79	501	2	139	517	19	245	1,481
Average annual per centage of sick to strength.	180·666	0·198	0·102	0·058	2·739	0·817	3·154	7·801	16·863	0	2·122	16·270	12·824	4·192	0·053	10·877	0·264	0	6·815	10·332	0·011	20·738	6·473	0·024	14,144	43·784
Do. do. of deaths to sick.	2·528	57·560	28·301	26·229	27,179	0·118	1·654	1·970	7·923	0	0·364	1·206	1·010	3·528	0	4·844	6·569	0	0·085	0·870	16·666	0·293	4·719	8·000	0·362	1·322
Do. do. of deaths to strength	4·568	0·114	0·029	0·015	0·744	0·000	0·052	0·153	1·336	0·000	0·007	0·196	0·129	0·147	0·000	0·526	0·017	0·000	0·005	0·089	0·001	0·060	0·305	0·001	0·051	0·579
Per centage of deaths and invalided to strength.	6·882	0·114	0·041	0·015	0·744	0·006	0·053	0·166	1·422	0	Fevers of all types.		0·546		0·000	0·825	0·062	0·000	0·076	0·484	0·001	0·134	0 499	0·018	0·236	1·431

Of the number invalided and not included under the diseases specified in this table, were

Anasarca	8	Enteritis	1	Otitis	1
Ascites	4	Epilepsia	49	Obstipatio	2
Apostema lumborum	3	Fistula in ano	8	Paralysis	80
Cephalalgia	32	Gastritis	1	Scrophula	24
Cystitis	1	Hœmorrhois	14	Scorbutus	4
Caries	1	Hernia	53	Splenitis	1
Dyspepsia	8	Hydarthrus	3	Ulcus	13
Dysecœa	19	Hydrothorax	1	Varix	35
Dysuria	10	Lumbago	1	Weakness of thumb	2
Debilitas	323	Morbus coxarius	3	At his request	2
		Melancholia	1	Bad character	3
		Necrosis	1	No case given	167
		Nephritis	3	Total	882

Of the Total number invalided,
were H. M.'s Troops............ 1248
H. C. Troops. 1146

Total..2394

The number from H. M. Troops are given under the general head "Invalided"; and of those of the H. C. Troops, viz, 1146.

Were invalided............ 431
,, pensioned................ 290
,, discharged............... 425

Total.. 1146

GENERAL TABLES.

Table No. 4.—Abstract of the preceding Return shewing the Total number of Admissions and Deaths, also the number invalided, &c. amongst the Native Troops of the Madras Army, from 1829 to 1838 inclusive.

	Diseases.																								
	Admissions and Deaths &c.	Apoplexy.	Atrophy.	Beriberi.	Cholera.	Cutaneous diseases.	Delirium tremens.	Diarrhœa.	Dysentery.	Elephantiasis.	Fever ephemeral.	,, continued.	,, intermittent.	,, remittent.	Guinea worm.	Hepatic diseases.	Insanity.	Leprosy.	Opthalmy.	Rheumatism.	Small pox.	Syphilis &c.	Thoracic diseases.	Ulcer, phagedenic.	Wounds & injuries.	Other complaints.
Aggregate Strength 5,68,403																									
Admitted. 1st half.	172882	79	455	533	3,255	6,687	58	4,665	2,656	3	12,913	2,462	46,052	4,466	767	244	373	9	2,823	14,613	322	6,141	2,196	24	13,437	47,649
Admitted. 2d half.	174445	69	471	1,271	2,091	6,304	43	4,345	2,850	9	16,531	2,290	49,302	3,580	245	243	345	8	4,398	14,601	93	5,516	2,802	28	12.4[illegible]	44.602
Total..	347327	148	926	1,805	5,346	12,991	101	9,010	5,506	12	29,444	4,752	95,354	8,046	1,012	487	718	17	7,221	29,214	415	11,657	4,998	52	25,845	[illegible]2.251
Died. 1st half.	4,803	51	78	79	1,438	4	2	220	300	0	75	128	737	212	2	30	22	0	6	224	27	38	301	2	76	751
Died. 2d half.	4,318	51	102	173	975	6	6	233	287	1	60	118	644	149	0	32	17	1	9	219	15	53	292	5	62	808
Total	9,121	102	180	252	2,413	10	8	453	587	1	135	246	1,381	361	2	62	39	1	15	443	42	91	593	7	138	1.559
Invalided..........	11558	3	53	72	2	7	0	26	25	8	Fevers of all types.		235		0	10	133	127	347	1125	1	242	357	214	527	8044
Total died & invalided.	20679	105	233	324	2415	17	8	479	612	9	Do.		2358		2	72	172	128	362	1568	43	333	950	221	665	9603
Average annual per centage of sick to strength.	61·105	0·026	0·162	0·317	0·940	2·285	0·017	1·585	0·968	0·002	5·180	0·836	16·775	1·415	0·178	0·085	0·126	0·002	1·270	5·139	0·073	2·050	0·879	0·009	4·546	16·229
Do. do. of deaths to sick.	2·626	68·918	19·438	13·968	45.136	0·076	7·920	5·027	10·661	8·333	0·458	5 176	1·448	4·486	0·197	12·731	5·431	5·882	0·207	1·516	10·120	0·780	11·864	13·461	0·533	1·189
Do. do. of deaths to strength.	1·604	0·017	0·031	0·044	0·424	0·001	0·001	0·079	0·103	0·000	0·023	0·043	0·242	0·063	0·000	0·010	0·006	0·000	0·002	0·077	0·007	0·016	0·104	0·001	0·024	0·274
Per centage of deaths and invalided to strength.	3·638	0·018	0·040	0·057	0·424	0·002	0·001	0·084	0·107	0·001	Fevers of all types.		0·414		0·000	0·012	0·031	0·022	0·063	0·275	0·007	0·058	0·167	0·038	0·116	1·[illegible]

Of the number invalided, and not included under the diseases specified in this Table, were

Atrophia	129	Colica	1	Fistula in ano	22	Splenitis	1
Anasarca	8	Concussio	3	Hæmorrhois	46	Varix	41
Apostema lumborum	2	Caries	21	Hernia	103	Bad workmen	3
Ascites	18	Diabetes	2	Hydarthrus	7	Bad character	421
Aphonia	5	Dyspepsia	4	Morbus coxarius	4	At his request	647
Burning of the feet	24	Dysuria	6	Malingering	53	Under-size	62
		Dysecœa	98	Nephritis	1	Supernumerary	7
		Debilitas	5944	Paralysis	187	Not given	13
		Epilepsia	56	Polypus nasi	1		
		Ebrietas	96	Scorbutus	8	Total	8044

Of the total number under the head "Invalided" viz. 11558.

Were pensioned	6491
Do. invalided	2559
Do. discharged	2508
Total..	11558

GENERAL TABLES.

EUROPEAN TROOPS.

No. 5.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, throughout the whole Army, during the period of five years, from* 1834 *to* 1838 *inclusive; also the number Invalided, Pensioned and Discharged, during the same period, and the per centage of sick to strength, of deaths to sick treated, of deaths to strength, and of deaths and invalids &c. to the strength.*

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 48870. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	Dd.	2d Half. Ad.	Dd.	Total admissions from each class.	Total deaths from each class.	Invalided &c. from each class of disease.	Total died and Invalided &c. from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.	Per centage of deaths to strength.	Per centage of deaths, invalids &c. to strength.
Fever	Febris ephemera	612	2	856	2												
	,, intermit quot	2,395	20	4,267	47												
	,, tertiana	609	4	1,345	11	8,353	110	11,483	176	19,836	286	57	343	40·589	1·441	0·585	0·701
	,, remittens	384	28	660	53												
	,, continua	4,353	56	4,355	63												
	Cholera	218	58	303	84	218	56	303	84	521	142	0	142	1·066	27·255	0·290	0·290
Diseases of the abdominal viscera	Dysenteria acuta	2,987	261	4,514	415	3,196	287	4,765	461	7,981	748	55	608	16·331	9·373	1·530	1·643
	,, chronica	209	26	271	46												
	Diarrhœa	1804	28	2,180	52												
	Colica	463	1	475	0												
	Obstipatio	503	2	603	1												
	Hœmorrhois	491	2	578	3	4 123	52	4,569	77	8,712	129	24	153	17·826	1·480	0·263	0·313
	Euteritis	54	4	49	3												
	Peritonitis	60	5	59	7												
	Gastritis	71	4	52	4												
	Dyspepsia	677	6	593	7												
	Hepatitis acuta	2,028	75	2,028	94	2,677	111	2,585	130	5,262	241	159	400	10·767	4·580	0·493	0·818
	,, chronica	649	36	557	36												
Diseases of the Lungs and heart	Catarrhus	1,181	15	1,108	19												
	Asthma	61	5	54	2												
	Phthisis pulmonalis	66	35	69	30												
	Hœmoptysis	41	3	35	3												
	Pleuritis	0	0	1	0	1,925	88	1,907	84	3,832	172	139	311	7·841	4·488	0·351	0·636
	Pneumonia	460	20	499	19												
	Carditis	20	2	27	4												
	Palpitatio	37	0	40	0												
	Dyspnœa	59	8	74	7												
Diseases of the Brain.	Apoplexia	58	37	33	22												
	Epilepsia	131	5	144	2												
	Paralysis	105	7	121	15												
	Cephalalgia	615	6	537	9												
	Phrenitis	10	0	2	2												
	Ictus solis	0	0	0	0	2,473	95	2,626	65	5,099	160	125	285	10·433	3·137	0·327	0·583
	Amentia	24	1	22	0												
	Mania	34	3	34	3												
	Hydrophobia	1	1	1	1												
	Delirium Tremens	418	25	431	9												
	Ebrietas	1,077	10	1,301	2												
Diseases of the Eye	Morbi oculorum	989	1	1,447	4	989	1	1,447	4	2,436	5	31	36	4·984	0·205	0·010	0·073
Do. Skin,	,, cutis	399	0	455	1	399	0	455	1	854	1	4	5	1·747	0·117	0·002	0·010
Eruptive fevers	Variola	6	1	4	1												
	Varicella	12	1	2	0												
	Rubeola	12	0	13	0	78	2	72	2	150	4	0	4	0·306	2·666	0·008	0·008
	Scarlatina	1	0	0	0												
	Erysipelas	47	0	53	1												
Dropsies	Anasarca	109	14	98	21												
	Ascites	34	11	54	12	147	26	156	35	303	61	5	66	0·620	20·132	0·124	0·135
	Hydrothorax	4	1	4	2												
Rheumatic affections.	Rheumat acutus	1,932	7	2,153	12												
	,, chronicus	1,011	15	1,040	20	2,964	22	3,228	32	6,192	54	313	367	12·670	0·872	0·110	0·753
	Neuralgia	0	0	0	0												
	Odontalgia	21	0	35	0												
Venereal affections	Syphilis primitiva	2,899	4	2,955	11												
	,, consecutiva	213	5	175	10												
	Gonorrhœa	3,029	1	2,914	3	6,758	11	6,674	30	13,432	41	51	92	27·485	0·305	0·083	0·188
	Hernia humoralis	508	1	552	4												
	Strictura urethræ	109	0	78	2												
Specific diseases	Atrophia	39	5	26	7												
	Beriberi	4	0	6	2												
	Elephantiasis	0	0	0	0												
	Lepra	0	0	1	0												
	Dracunculus	42	0	19	0	181	9	147	10	326	19	31	50	0·671	5·792	0·038	0·102
	Ulcus phagedenicum	7	0	8	0												
	Scrophula	57	1	59	0												
	Scorbutus	32	3	28	1												
Punishment	Punitus	235	1	249	0	235	1	249	0	484	1	0	1	0·990	0·206	0·002	0·002
Wounds and injuries	Fractura	131	2	128	3												
	Luxatio	67	0	63	0												
	Subluxatio	339	1	308	1												
	Vulnus sclopitorum	62	2	51	3	3,411	14	3,183	13	6,594	27	92	119	13·492	0·409	0·055	0·243
	,, incisum	511	1	505	3												
	Contusio	2,211	7	2,047	3												
	Ambustio	90	1	81	0												
Other diseases, including Phlogosis Ulcus &c.		5,450	37	5,643	47	5,450	37	5,643	47	11,093	84	347	431	22·698	0·757	0·171	0·881
	Total	43,577	924	49,532	1,251	43,577	924	49,532	1,251	93,109	2,175	1,433	3,608	190·523	2·335	4·450	7·382

Of the number invalided under the head "Other diseases" are included the following:

Apostema lumborum	3
Morbus coxarius	1
Fistula in ano	8
Ulcus	20
Otitis	1
Nephritis	2
Hernia	27
Varix	34
Hydarthrus	2
Dysecœa	9
Dysuria	7
Splenitis	1
Weakness of thumb	2
Physical debility	206
No cause given.	20
At his own request	2
Bad character	2
Total..	347

Of the admissions and deaths under the head "other diseases."

Were Phlogosis	3116	7
,, Ulcus	3245	8
,, Bubo simplex	1691	5
Total..	8052	20

The deaths under the head "other diseases." include besides those accounted for in the preceeding note viz.

20	Phlogosis &c.
6	Aneurisma.
9	Splenitis.
2	Apostema lumborum.
1	Fistula in perineo.
1	Fistula in ano.
2	Splenitis.
1	Nephritis.
1	Dysuria.
1	Hydarthrus.
1	Prolapsus ani.
2	Anæmia.
2	Melancholia.
3	Icterus.
2	Diabetes.
2	Cachexia.
7	Cynanche.
1	Cystitis.
1	Hæmatemesis.
19	Not particularised.
84	Total.

Of the number invalided 1433, 869 were from H. M. Troops, and 564 of the H. Company.

Of which latter were invalided	187
Pensioned	150
Discharged.	227
Total..	564

NATIVE TROOPS.

No. 6.—*Table exhibiting the number of Admissions and Deaths from each class of Disease, throughout the whole Army, during the period of five years, from 1834 to 1838 inclusive; also the number Invalided, Pensioned or Discharged during the same period, and the per centage of sick to strength, of deaths to sick treated, of deaths to strength, and of deaths and invalids &c. to strength.*

CLASSES.	DISEASES.	From 1834 to 1838. Aggregate strength 267786. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad	2d Half. Dd.	Admissions & deaths from each class of disease. 1st Half. Ad.	1st Half. Dd.	2d Half. Ad.	2d Half. Dd.	Total admissions from each class.	Total deaths from each class	Invalided &c. from each class of disease.	Total died and Invalided &c. from each class.	Per centage of sick to strength.	Per centage of deaths to sick treated.	Per centage of deaths to strength.	Per centage of deaths, invalids &c. to strength.
Fever......	Febrisephemera	8,834	45	10,241	46	47,594	829	47,234	629	94,828	1,458	176	1,634	35·411	1·537	0·544	0·616
	,, intermit quot	31,643	537	30,604	387												
	,, tertiana......	2,261	19	3,164	27												
	,. remittens	3,130	139	1,899	88												
	,, continua......	1.726	89	1,326	81												
	Cholera	907	417	1,053	484	907	417	1,053	484	1,960	901	2	903	0,731	45·969	0·336	0·337
Diseases of the abdomiual viscera......	Dysenteriaacuta	1,492	167	1,379	135	1,764	223	1,636	182	3,450	405	18	423	1·288	11·739	0·151	0·157
	,, chronica......	272	56	307	47												
	Diarrhœa	2.794	131	2,364	129	5,618	212	5,451	209	11,069	421	60	481	4·133	3·803	0·157	0·179
	Colica..........	695	7	619	8												
	Ohstipatio......	490	6	642	16												
	Hœmorrhois....	223	6	223	3												
	Enteritis........	19	91	14	5												
	Peritonitis......	17	2	23	4												
	Gastritis........	11	5	17	1												
	Dyspepsia......	1,369	46	1,549	43												
	Hepatitis acuta	94	12	87	9	120	18	122	13	242	31	8	39	0·090	12·879	0·011	0·014
	,, chronica....	26	6	35	4												
Diseases of the Lungs and heart	Catarrhus......	760	46	837	48	1,441	188	1,674	164	3,115	352	239	591	1·163	11·300	0·131	0·220
	Asthma	260	32	429	21												
	Phthisis pulmonalis..........	89	49	90	50												
	Hœmoptysis....	23	4	27	5												
	Pleuritis........	0	0	0	0												
	Pneumonia.....	183	35	161	25												
	Carditis........	3	1	7	1												
	Palpitatio	7	2	7	1												
	Dyspnœa.......	116	19	116	10												
Diseases of the Brain.	Apoplexia......	35	24	29	20	915	75	843	74	1,788	149	251	400	0·667	8·533	0·055	0·149
	Epilepsia.......	56	4	60	13												
	Paralysis.......	144	21	149	14												
	Cephalalgia	439	8	363	4												
	Phrenitis.......	11	0	1	1												
	Ictus solis......	0	0	0	0												
	Amentia........	81	6	60	8												
	Mania...........	116	7	122	2												
	Hydrophobia...	2	2	5	5												
	Delirium Tremens.........	61	3	54	7												
	Ebrietas........	0	0	0	0												
Diseases of the Eye..	Morbi oculorum	1,478	4	2,451	6	1,478	4	2,451	6	3,929	10	208	218	1·467	0·254	0·003	0·081
Do. Skin,	,, cutis......	6,647	3	6,459	5	6,647	3	6,459	5	13,106	8	4	12	4·891	0·061	0·002	0·004
Eruptive fevers.......	Variola	193	11	64	6	1,649	14	488	7	2,137	21	0	21	0·798	0·982	0·007	0·007
	Varicella.......	1,229	0	267	0												
	Rubeola........	180	1	111	1												
	Scarlatina......	1	0	1	0												
	Erysipelas......	46	2	45	0												
Dropsies...	Anasarca.......	314	68	341	70	361	88	386	89	747	177	16	193	0 278	23·694	0·066	0·072
	Ascites........	41	14	36	15												
	Hydrothorax ...	6	6	9	4												
Rheumatic affections.	Rheumat acutus	4,521	63	4,258	51	8,042	110	7,901	102	15,943	212	739	951	5·953	1·329	0·079	0·355
	,, chronicus	3,405	47	3,556	51												
	Neuralgia......	0	0	2	0												
	Odontalgia.....	113	0	85	0												
Venereal affections ..	Syphilis primitiva....	1,538	7	1,304	10	3,073	21	2,675	24	5,748	45	154	199	2·146	0·782	0·016	0·074
	,, consecutiva.	225	10	203	3												
	Gonorrhœa.....	637	3	584	6												
	Hernia humoralis...........	614	0	552	3												
	Strictura urethræ.........	59	1	32	2												
Specific diseases.....	Atrophia.......	434	61	432	87	1.729	111	1,538	210	3,267	321	255	576	1·220	9·825	0·119	0·215
	Beriberi.......	360	47	675	110												
	Elephantiasis...	3	0	9	1												
	Lepra..........	9	0	7	0												
	Dracunculus....	745	1	245	0												
	Ulcus phagedenicum........	22	0	27	3												
	Scrophula......	142	2	124	8												
	Scorbutus.......	14	0	19	1												
Punishment	Punitus.........	140	0	88	0	140	0	88	0	228	0	0	0	0·085	0·000	0·000	0·000
Wounds and injuries...	Fractura........	130	2	129	4	6,967	43	6,506	33	13,173	76	307	383	5·031	0·561	0·028	0·143
	Luxatio........	45	0	48	0												
	Subluxatio.	423	2	420	2												
	Vulnus sclopitorum..........	325	21	111	4												
	,, incisum......	1,109	7	1,088	7												
	Contusio.......	4,695	10	4,460	15												
	Ambustio	240	1	250	1												
Other diseases, including Phlogosis Ulcus &c............		13,465	98	13,391	115	13,465	98	1,3391	115	26,856	213	3,161	3,374	10·028	0·793	0·079	1·259
	Total....	1,01,940	2,454	99,946	2,346	101,940	2,451	99,946	2,346	20,1886	4,800	5,598	10,398	75·390	2·377	1·792	3·882

Of the number invalided under the head "Other diseases" are inclnded the following:

Apostema lumhorum..............	2
Apbonia..........................	5
Burning of the feet...............	22
Caries............................	13
Dehilitas	2555
Diabetes..........................	2
Dysnria...........................	2
Dysecœa..........................	53
Fistnla in ano....................	15
Hernia..	62
Hydarthrus......................	3
Morbus coxarius.................	2
Polypus nasi.....................	1
Nephritis.........................	1
Ulcus............................	101
Varix............................	31
Malingerer......................	21
Under-size.......................	3
Bad cbaracter....................	99
At his own request..............	163
Unahle to sonnd tbe hngle........	1
Not given........................	4
Total..	3161

Of the admissions and deaths under the head "other diseases."

Were Pblogosis.................	13557	44
,, Ulcus.......................	8617	33
,, Buho simplex..............	2041	3
Total..	24245	85

The deaths under tbe head "other diseases," include besides those accounted for in the preceeding note viz.

85	Phlogosis &c.
3	Aneurisma.
1	Apostema lumborum.
2	Arthritis.
1	Cacnexia.
10	Cynanche.
1	Cystitis.
5	Diabetes.
3	Dysuria.
2	Fistula in ano.
4	Fistula in perineo.
2	Epistaxis.
5	Hæmatemesis.
4	Hernia.
5	Hydrophobia.
1	Hydarthrus.
13	Icterus.
1	Laryngitis.
1	Melaucholia.
1	Morhus coxarius.
1	Polypus nasi.
1	Prolapsus ani.
2	Scirrhus.
16	Splenitis.
24	Tetauus
2	Tympanites
2	Vermes intestinorum
1	Varix.
16	Not particularised.
213	Total.

The total number invalided 5598 includes 1066 invalided.
3700 pensioned.
832 discharged.

5598

No. 7.—*Table exhibiting the number of Admissions and Deaths from the most important diseases, amongst the European and Native Troops, in the Madras Army, during the period of ten years, from* 1829 *to* 1838 *inclusive; it shews also the proportion each bears to the total number of Admissions and Deaths; the contrast in several of the columns of diseases cannot fail to be remarked.*

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these compts	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
Europeans.																		
Total Admissions . . 186,865	2833	1/66	36624	1/5	17442	1/11	11251	1/16	8069	1/23	6696	1/28	10687	1/17	21450	1/8	115052	6/10
„ Deaths 4,725	770	1/6	498	1/9	1382	1/3	545	1/8	159	1/29	316	1/15	93	1/51	63	1/75	3826	4/5
Natives.																		
Total Admissions . . 347,327	5346	1/65	137596	2/5	5506	1/63	487	1/713	9010	1/38	4998	1/69	29214	1/12	11657	1/29	203814	16/27
„ Deaths 9,121	2413	1/4	2123	1/4	587	1/15	62	1/147	453	1/20	593	1/15	443	1/20	91	1/100	6765	4/5

No. 8.—*The following table further exhibits the per centage of admissions from the same diseases to the strength, of deaths to sick treated, and of deaths to the strength; it also points out the difference in both these respects, amongst the European and Native sick.*

	Cholera.		Fever.		Dysentery.		Hepatitis.		Diarrhœa.		Thoracic diseases.		Rheumatism.		Syphilis.		Total from these diseases.		Grand total.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 103,431.																				
Per centage of sick to strength	2833	2·739	36624	35·409	17442	16·863	11251	10·877	8069	7·801	6696	6·473	10687	10·332	21450	20·738	115052	111·235	186865	180·666
„ of deaths to sick treated.	770	27·179	498	1·359	1382	7·923	545	4·844	159	1·970	316	4·719	93	0·870	63	0·293	3826	2·047	4725	2·528
„ of deaths to strength. . .	770	0·744	498	0·481	1382	1·336	545	0·526	159	0·153	316	0·305	93	0·089	63	0·060	3826	3·699	4725	4·568
Native Troops. STRENGTH, 568,403.																				
Per centage of sick to strength	5346	0·940	137596	24·207	5506	0·968	487	0·085	9010	1·585	4998	0·879	29214	5·139	11657	2·050	203814	35·769	347327	61·105
„ of deaths to sick treated.	2413	45·136	2123	0·611	587	10·661	62	12·731	453	5·027	593	11·864	443	1·516	91	0·780	6765	1·948	9121	2·626
„ of deaths to strength. . .	2413	0·424	2123	0·373	587	0·103	62	0·010	453	0·079	593	0·104	443	0·077	91	0·016	6765	1·190	9121	1·604

No. 9.—Table showing the amount of Admissions and Deaths from the principal classes of diseases, for the period of five years, from 1834 to 1838 inclusive, with the proportion of Admissions from each to the total of sick treated, and of deaths to the total mortality.

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.	Ad. & deaths.	Prop.
European Troops.																				
Total Admissions....93,109	19836	2/9	521	1/179	7981	2/23	8712	2/21	5262	1/18	3832	1/23	5099	1/18	303	1/307	6192	1/15	13432	1/7
„ Deaths........ 2,175	286	2/15	142	1/15	748	1/3	129	1/17	241	1/9	172	2/25	160	2/27	61	1/36	54	1/40	41	1/53
Native Troops.																				
Total Admissions . 201,886	94828	1/2	1960	1/103	3450	1/58	11069	1/18	242	1/833	3115	1/65	1788	1/113	747	1/270	15943	1/12	5748	1/35
„ Deaths........ 4,800	1458	1/3	901	1/5	405	1/12	421	1/11	31	1/155	352	2/27	149	1/32	177	1/27	212	2/45	45	1/107

No. 10.—*Table exhibiting the per centage of Admissions from the same classes of diseases to the strength, of deaths to sick treated, and of deaths to strength, both amongst European and Native troops.*

	Fevers.		Cholera.		Dysentery.		Abdominal complaints.		Diseases of the Liver.		Diseases of the Lungs.		Diseases of the Brain.		Dropsies.		Rheumatic affections.		Venereal complaints.	
	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.	Ad. & deaths.	Per-cent-age.
European Troops. STRENGTH, 48870.																				
Per centage of sick to strength	19836	40·589	521	1·066	7981	16·331	8712	17·826	5262	10·767	3832	7·841	5099	10·433	303	0·620	6192	12·670	13432	27·485
„ of deaths to sick.....	286	1·441	142	27.255	748	9·373	129	1·480	241	4·580	172	4·488	160	3·137	61	20·132	54	0·872	41	0·305
„ of deaths to strength..	286	0·585	142	0.290	748	1·530	129	0·263	241	0·493	172	0·351	160	0·327	61	0·124	54	0·108	41	0·083
Native Troops. STRENGTH, 267786.																				
Per centage of sick to strength	94828	35·411	1960	0·731	3450	1·288	11069	4·133	242	0·090	3115	1·163	1788	0·667	747	0·278	15943	5·953	5748	2·146
„ of deaths to sick.....	1458	1·537	901	45·969	405	11·739	421	3·803	31	12·809	352	11·300	149	8·333	177	23·694	212	1·329	45	0·782
„ of deaths to strength..	1458	0·544	901	0.336	405	0·151	421	0·157	31	0 011	352	0·131	149	0·055	177	0·066	212	0·079	45	0·016